Vol. LIII, 4 Whole No. 316

THE PHILOSOPHICAL REVIEW

EDITED BY
THE FACULTY OF
THE SAGE SCHOOL OF PHILOSOPHY
CORNELL UNIVERSITY

WITH THE CO-OPERATION OF

ETIENNE GILSON (Paris)
A. E. TAYLOR (Edinburgh)

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July, 1944

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PUBLISHED EVERY TWO MONTHS

FOR

LONGMANS, GREEN, AND COMPANY

SINGLE NUMBERS $1.00 PER ANNUM $5.00

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Articles intended for publication, books for review, exchanges, and all correspondence in reference thereto, should be addressed to **The Editor, The Philosophical Review, Cornell University, Ithaca, N.Y.**

The articles in this *Review* are indexed in the *International Index to Periodicals*, New York, N.Y.

Longmans, Green, and Co.
55 Fifth Ave., New York 3

Entered as second-class matter at the postoffice at Menasha, Wisconsin, July 8, 1933, under the act of March 3, 1879, embodied in section 520, P. L. and R.

Number 4 *Whole*
Volume LIII *July, 1944* *Number 316*

THE
PHILOSOPHICAL REVIEW

A CONTRIBUTION TO THE PROBLEM OF IMMORTALITY*

IF WE could suddenly acquire the capacity of communicating with the "other world" (where, as the reader knows, our precious souls are expected to live for ever), if we had been allowed to speak to our favorite saint, to an enslaved demon, or even God himself, upon the invidious question of immortality, our good friends from the Great Beyond, even if they sincerely wished to satisfy our everlasting curiosity in the matter, would probably find it embarrassingly difficult to think of a proper answer which we, terrestrial creatures, could understand. Suppose you were standing on the North Pole, and someone came and asked you "where is West?", what would you say? If you had been studying symbolic logic, you would probably reply that it is a meaningless question which only a person could ask who never read Carnap or Bertrand Russell. Obviously, the North Pole is one of the two limiting positions on the globe where the distinction between East and West vanishes. But if you had been previously infected by some philosophies of less repute, you might consider that by calling the question meaningless you would probably cheat your unenlightened stranger. For, in a sense, at that particular point West is everywhere. If you agree to define "West" as the direction which lies on your right when you are facing South, then every direction on the North Pole will satisfy that condition; for wherever you turn standing on the North Pole you will always be facing South, and hence will always find West conveniently at your right. Similarly, if your celestial friend wished to make himself intelligible to you in answering your question concerning immortality, he would probably find himself in an equally perplexing

* Paper read before the Theological Society on the Pacific Coast.

situation. For it is very likely that the answer does not easily yield itself to the conditions of our terrestrial logic.

Dostoyevsky once suggested that in the "other world" they have exactly the same things as we have, including the police departments and three-hundred-pound prima donnas singing in the celestial choir. Everything on the earth, he adds Platonically, has its celestial counterpart, except for one substantial difference: everything here in this world is geometrically outlined and statistically tabulated, whereas up there . . . nothing but indeterminate equations! Now, following Dostoyevsky's suggestion a little further, and realizing that indeterminate equations have an indefinite number of solutions depending on the value or meaning assigned to x, one could easily see that in the process of our imaginary conversation with the "other world" we would inevitably discover that gods have no other way of speaking with us except, perhaps, in riddles and paradoxes such as Eddington speaks to his mathematically unenlightened reader; and that it is safer, and far less humiliating to us, to return to the circumscribed scientific stability of the symbolic logic in which no meaningless questions are asked except for the benefit of the uninitiated.

But why should the answer be taken as particularly perplexing or difficult to convey? Presumably it is either yes or no. The only remaining possibility is one of agnosticism. We are either mortal or immortal (or at least nonmortal, if you happen to teach a class in logic). In any event, we shall either die and perish completely and irrevocably, or we shall somehow be able to elude the terrifying prospect which we call death and shall continue to exist. How? That is a different question. It may be difficult, or indeed impossible, for us to imagine the manner or place of our future habitation (especially in view of our behavioral differences). But the bare fact of our existence or nonexistence can very well be comprehended in terms of plain human intellect, provided there is someone or something to tell us the truth about it. Be it an angel or a demon, he would not have to use any formulas of higher mathematics; he could simply say "yes" or "no".

As a matter of fact, with the exception of a few agnostics the average educated man of today seems to be pretty certain about this matter of immortality. As a rule, he is quite convinced that

our mental life, being a product of natural conditions, will cease to exist when the mechanism necessary for its continuation is worn out. What evidence is there, he will ask, for believing in the life hereafter? Are we to trust various, presumably "authentic", experiences of the historically notorious ghostseers, on the ground that some of them might have been earnest and trustworthy people? When one begins asking for "evidence" in any matter which concerns metaphysics, you may be fearly certain that for him the question is closed, and that his answer is definitely: No! Accordingly, the problem of immortality is dealt with by the modern mind as a mere survival of a mediaeval superstition to be dismissed with nothing more serious than a supercilious smile. In the spirit of this "modern" and "scientific" attitude there seems to be no cogent argument in favor of my initial assertion that the riddle of immortality is comparable to the directional situation on the North Pole. Why should there be any mysterious difficulty in conveying the correct answer to anyone, even to a person with hopelessly Euclidian logic? Most probably, on the basis of our empirical evidence, or rather lack of evidence, the answer is "no". If some theological arguments are perchance valid, the answer is "yes". The only remaining possibility is that "I don't know" and "I don't care", which is equally intelligible and involves no mysterious implications. Am I not conjuring difficulties which are not there? Or what do I mean?

Let me explain a little more precisely what I mean. The three solutions thus briefly outlined, however different from and antagonistic toward one another, stand nevertheless on a common ground, and make quite imperceptibly one common assumption. This assumption, like most common assumptions, *seems* to be so utterly trivial and so perfectly selfevident that we are rarely aware of its being an essential part of the argument. When I say that I will survive, or perish, after my physical death, I think of myself as an individual being, not necessarily a "soul" or a "substance", but at least as a unique complex of experiences, as a function or a flow. It is further assumed, on the basis of plain evidence and without any proof, that I am different from you *in a manner in which one atom is different from another atom*, or a chair is different from a table; and that together we constitute a plurality

called "we". In the learned discussions of today the word "soul" is, of course, carefully avoided. But the gist of the matter remains invariant, and independent of terminology. It is taken for granted without even a shadow of doubt that "we" who are believed to be either mortal or immortal are plural individual beings who are not only separate from one another, but *wholly closed to each other's inner experience. I,* it is argued, cannot experience *your* pain, except indirectly; nor can *you* have a direct awareness of *my* pain. Never mind that no one knows just what "directly" means in this connection, or what the word "inner" stands for, or what the difference between "my" and "your" pain really is. The "fact", it is said, remains that, when I am in bed with a severe headache, you may have a keen sympathy for me, but you certainly do not suffer *my* headache.

But is it a fact? It is said that the experience of one individual consciousness can never be a part of another individual consciousness. Your pain is not my pain. Your consciousness is a closed book to me, except for indirect evidence. But how do I know this? If "fact" is something directly given to me in my experience, how can *you* be a fact to *me,* since by assumption you are never directly given to me in my experience? If one recognizes the question-begging nature of the argument, one must admit that *to me* you are not a fact, but a hypothesis, or an intellectual construction involving a complex and even perplexing interpretation of the world. Then our consciousnesses, or I's, different as they are, must also be differently located. And yet it is difficult to imagine consciousness as being located at all.

But what if this customary interpretation is wrong? Suppose we have no existence as individual spirits or minds. Must we, then, evaporate into a sort of universal soul, or Brahma? Or do we have to doubt each other's existence and play the puerile game of solipsism? Is not, perhaps, some other interpretation possible which could preserve "you" and "me" intact, and eliminate only a certain illusory set of presuppositions connected with those simple, but theoretically perplexing, words?

Let me at once indicate another possible interpretation. From the fact that my body and your body have different weights, it does not follow that we are confronted with two different gravi-

tations. "I" may very well be something comparable to gravitation, something that indicates merely a *manner* in which different experiences are brought together and "synthesized"; but not the stuff of which those experiences are made, or a center to which they belong. If that interpretation be correct, the multiplicity of I's is merely a linguistic illusion arising from the fact that it is customary among us to employ the word "I" as a noun, whereas in reality it might very well be something in the nature of an *adverb*, i-ly. The phrase 'I read a book' is a linguistic shortcut, an abbreviated expression for a dynamic human situation in which certain actions, namely reading, are organized and connected with a unique set of conditions, called "my life". What actually and empirically happens in that situation is that a process known as reading is taking place *in the manner of I*. "You" and "he" would not indicate another manner, but only another set of associations carried out in *exactly the same manner*.

This is perhaps the difficulty that the angels would have in explaining the "truth about immortality" to us. They would first have to teach us a different language in which substantives will be banished from certain popular linguistic formulas, such as "I do" or "I am". This would involve a radical reinterpretation of the world and of our existence in it on the basis of the assumption that we are not nouns but adverbs. In other words, they would have to teach us to take seriously our own modern criticism of "substance" as applied to psychology.

I do not think that the criticism of the idea of "substance" has ever been taken seriously, or carried to its logical conclusions. Our psychologists claim to have discarded the idea of the "soul" and to have banished the notion of "substance" from their young science. But from the little reading of modern psychology I have done I have derived the impression, probably a hasty one, that, having once repudiated the idea of the "soul" as a substance, they have conveniently reintroduced it under a different name and covered with different garments. They seemed to let it go out through one door, and immediately usher it in through another. Thus it happens, that in the midst of dramatic denunciations and lengthy soliloquies against the villainous "soul", the villain enters and remains on the stage set up for its relentless persecution, enjoying

the naïve and often enthusiastic support of its own persecutors, because the latter have no courage to carry out their argument to its logical consequences. Otherwise, why this determined insistence on "individual consciousnesses" (an ugly plural, such as only the academic style could invent)? Why is it that consciousness must be "individual", and one ego separate from other egos? Is it not because, according to Aristotle, substance must be individual? Aristotelian tradition is still very strong, even in those quarters where people are not aware of being the victims of it. It appeals to our pragmatic and empirical turn of mind to think of the individual as the basis of existence. There is something palpable, something colloquially "substantial", about individual cases and individual "existents". And thus, under the pressure of "substance", our consciousness must be individual.

Consciousness as a fact of "inner" experience is beset with seemingly insuperable difficulties. Why not try to overcome the difficulties by simply denying the fact? Such a negative attitude is original and daring, and has all the appearance of a scientific show. Behavior is something that can be observed, statistically computed, and even measured with a fair degree of mathematical precision, whereas that "inner" factor can be neither seen nor accurately reproduced. It is so easy to tell your disciples with the air of learned profundity that you "have no interest" in problems which cannot be scientifically approached. The young disciples are usually so genuinely grateful when they are allowed legitimately to deny something, to snatch the mask from the face of respectability; they are—especially in our day—so eager to "debunk", so naïvely enthusiastic when they are relieved of a grave intellectual responsibility, that it is extremely gratifying for the "professor" to disentangle the difficulties by denying the issues. Behaviorism has for the last two or three decades eminently served this purpose. Consciousness was eliminated, liquidated. The modern generation of psychologists seems to be positively enthusiastic over the prospect of losing consciousness completely and irrevocably. Consciousness has become a compromising word, like God, or free will. Phychologists seem to be extremely apologetic for being obliged to use the word even once in a great while. Professor Koffka writes: "In my distinction of geographical and behavioral environment, admittedly

equivalent to that of reality and appearance, have I not smuggled in consciousness through a back door? *I must deny this accusation.*" Thus, you see, he regards it as an accusation. He is careful not to produce the impression upon his more radical colleagues that he is a reactionary, that he talks metaphysics. Weighing the situation in retrospect he, too, feels historically compelled to take, or at least to produce the impression of taking, a negative attitude toward the "villain".

But with all this, it would be ridiculous to disregard the achievements of modern experimental psychology, and especially of *Gestalt* psychology. Let us, as a typical illustration, briefly consider Koffka's contributions more in detail. With all his stereotyped, and largely pretended, hostility against "consciousness", Mr. Koffka describes nothing but consciousness—not in its substance, but in its *performance*—as a mechanism for organization. He describes it more effectively, and more ingenuously, than all the preceding generations of idealistic and introspective psychologists. He makes it perfectly clear that the bearer of consciousness is *not* a mysterious substance, but precisely human and animal behavior. There are no metaphysical implications in this relationship. Behavior is not an outward expression of the inner consciousness, but precisely the consciousness itself in its existential[1] functioning. It is obviously not true, as Mr. Koffka inadvertently suggests, that "the dog's consciousness is a 'hare running through a field' ", because the dog's consciousness is functioning in many, many other situations and things. But it is true, I think, that "a hare running through a field" may be, for the moment at least, the dog's consciousness. For "running" does not exist in the molecular, or atomic, world, which knows nothing but "movements".

Hence Mr. Koffka in describing behavior describes precisely consciousness, or the performance of the mind. And he does it very excellently, much better than the associationists or the rational psychologists had ever dreamed of doing. He effects this description in a number of ways which the limited space of a journal article prevents me from discussing in detail. But one of his descriptive devices is so important, and has such a profound bearing upon my present task, that I cannot omit it. Mr. Koffka describes the

[1] Cp. Heidegger, *Sein und Zeit.*

performance of consciousness by reference to its organizing—Kant would say "synthetic"—effect. Consciousness is an unique and indefinable manner of bringing things together, of collecting and holding them within a "whole". Consciousness, not as a substance but as an effect, as a descriptive phenomenon, is the property of a field, not of an individual point. It does not exist in isolation, within an individual, or within anything. It exists only dynamically, or relationally, as the manner of operation controlling the whole field of experience. "It is as though the dynamics of each field part, the forces to which they owe their existence, were at least vaguely revealed in consciousness, *i.e.*, in the properties of the behavioral environment."[2] Consciousness is the way in which an armchair invites me to sit, in which a road controls my driving, a mathematical problem presses toward a solution, or a spoken word serves as a signal. Thus all psychological processes are "processes in organization",[3] namely, the organization of the behavioral field. They are not substance, but field phenomena. Consciousness is not located "somewhere under my skull", but precisely amidst the chairs and tables, along the roads and mountains, in spoken words and other signals. For a signal cannot signify anything unless it is organized and connected with other things of my environment, including emotions, *in the manner of consciousness.*

What has been said in the last paragraph fully agrees with the position suggested in the beginning of this article. Consciousness is not a noun, but an adverb; it is not a substance, but a manner, namely, the manner in which the chairs and tables, the ghosts and the people, are brought about and kept together within that continuous stream of dramatic events called Life. Obviously, this *manner* is, by definition, not confined to the narrow limits of my individual horizon.

The word "individual", like most philosophical expressions is an ambiguous term. There is a good, descriptive "individuality", and there is a bad, metaphysical "'individuality". Descriptively, "individual" means an organized whole which cannot be broken into

[2] K. Koffka, *Principles of Gestalt Psychology* 33, 35, 39, 44, 50, 51, 55, 307, 656.
[3] *Ib.* 401-402.

parts without being destroyed and annihilated. Metaphysically, it means something opposed to the universal, something made of a concrete stuff different from the attenuated material with which the universals are built, something that has body and flesh, and excludes other individuals from the territory it occupies. This is admittedly vague. But I doubt if such "bad" concepts could be rendered more exact. Their exactness is deceitful. They claim to be empirical; but in reality they consist of assumptions and redundant speculations. This bad individuality—be it in sociology, psychology, or physics—is filled with the same *solid impenetrability* with which the atoms of the ancient materialists were filled, and which seemed to them clear and intelligible only because in its dark metaphysical cavities it redundantly repeated the descriptive empirical "qualities" of sight, touch, and organization. At the root of this "solid impenetrability", both material and mental, lies the same old "substance", matter and soul, only vulgarized and presumably reduced to the terms of plain common sense.

Any argument carried to its logical conclusions becomes, seemingly, illogical. The logical conclusion from the "sacrifice of the soul" is that we, the souls, are not as obscurely different from one another as our bad individualism suggests. If I am only a *manner*, and not an obscure, impenetrable substance, then you and I are not only similar, but identical *in so far as that manner is concerned.* For the manner, like the law of gravitation, does not change from one point to another. From this it does not follow—and that is where the argument seems illogical—that I am *in* you, and you *in* me, or that we can read each other's thoughts by mental telepathy. For there is nothing in you and me except that very same manner *plus* different continuities of our respective experiences. This manner is relatively indestructible. It identically repeats itself as long as life goes on.

I would spare the professional reader the reference to the innumerable differences in the meaning of "I". William James mentions only four. Professor Allport produces fifty varieties. Those distinctions are much more important for the psychologist than for the philosopher. But there is one fundamental distinction in the meaning of the word which is necessary to make to clarify our issue. This distinction is odious in some philosophical quarters, and

the reference to it will, no doubt, be met with expressions of impatience and even irritation. Nevertheless I consider it important for the logical survival of my argument. It is concerned with what William James aptly calls the difference between "me" and "I". The reluctance to share the suggestions expressed in the present article, whether old or new, will partly, I am afraid, be due to the failure to keep this distinction clearly in mind.

When the psychologist insists on the exclusiveness of individual consciousness, and is determined to use his barbaric plural, "consciousnesses", he employs the word "I" in the above sense of a specific continuity of individual experiences, as a bundle of traits and drives, of inhibitions and frustrations, of specific memories and specific anticipations. This is what William James refers to as "me". It is the *mortal* part of myself, my "empirical ego". It is an object among other objects. It is not easily localized. But the ingenuity of *empirical psychology*—I suppose on the basis of observation; for what does "empirical" mean if it is not based on the glorified principle of observation?—found a proper place for this empirical ego to exist. According to Professor Köhler it is located precisely "between the last thing just in front and behind". Just how one can precisely determine which the last thing in front of me is constitutes a mystery, perhaps because of my profound ignorance of observational methods. But anyway that is what the psychologists say.

The other meaning of the word "I"—that "I" which is not so easily observable either in front or in between, and is therefore often denied the status of reality—is thus described by William James:

> Whatever qualities a man's feelings may possess, or whatever *content* his thought may include, there is a spiritual something in him which seems to *go out* to meet these qualities and contents, whilst they seem to *come in* to be received by it. It is what welcomes or rejects. It presides over the perception of sensations, and by giving or withholding its assent it influences the movements they tend to arouse. It is the home of interest—not the pleasant or the painful, . . . but that within us to which pleasure or pain, the pleasant and the painful, speak. It is the source of effort and attention, and the place from which appear to emanate the fiats of the will.

In other words, it is the organizing factor in our behavioral world, without which the word "behavior" itself becomes a meaningless

sound. It is as universal as gravitation, and yet it is concrete and individual, intimately familiar to me and to you in the manner in which it transforms black markings on paper into meaningful words, the gentle sounds reaching me from the adjoining room into a Chopin waltz, and the monotonous sound of a cricket into a passionate lovecall to its nocturnal mate.

In the beginning of this century in Germany much was made, and even more was expected, from the generalized concept of consciousness which was promiscuously used by a variety of philosophical parties under the name of *Bewusstsein überhaupt* or *reines Bewusstsein*. Nearly all the venerable professors of philosophy under whom I had the privilege to study used that expression liberally, frequently, and with an air of pontifical importance. Windelband, Rickert, Emil Lask, Hermann Cohen, seemed to be intellectually intoxicated with anything that was *überhaupt*—a word usually accompanied by a peculiar gesture terminating in a reverent, upward movement of the professor's hand. As I now recall it, not much meaning was associated with those reverent words. They had come to be purely ritualistic—a sort of a professorial conditioned reflex. But the emotional implications were as strong as they were contagious. We, the young and eager disciples, whose profound ignorance was on a par only with our unbounded conceit, were left with the impression that the more general, that is the more *überhaupt*, a concept is, the more truth and dignity it carries. We had no respect for anything unless it was *rein*, that is "pure", or "general", or—another sacerdotal expression of those beautiful days—"transcendental". All those terms were practically synonymous with one another, because they conveyed the minimum of rational meaning with the maximum of emotional esteem. The colossal naïveté coupled with the amazing thoroughness of Teutonic character purified and transcendentalized our minds to such an extent that when Nicolai Hartmann began to write about the abundance of concrete material in knowledge and values, it sounded positively shocking, almost indecent. And Hermann Cohen was, as a result, not on speaking terms with him.

It occurs to me that people of my generation and background will naturally be inclined to interpret the position here advocated in terms of that famous *Bewusstsein überhaupt*. And, to be sure,

if there are individual *Bewusstseinen* in the plural, and if they all have something in common with one another, that very factor which they have in common does not perish with the elimination of any number of such individual centers, and is in this sense immortal.

I must emphatically deny the validity of this historical parallel. The adverbial existence of consciousness, if at all true, does not presuppose or entail the dissolution of it into a pale abstraction. Consciousness in its I-form is not a generality. It is a unique situation or occurrence in nature—unique, not in the sense that it appears at one particular time and place, but in the sense that it has a unique and deeply complex structure, to the empirical nature of which belongs egocentricity (probably in various degrees of evolutionary development). "Complexity" is, again, an ambiguous word. I do not mean complexity of "me" as an organized unit of emotions, intentions, and what not. I mean the complexity of "I", not "me"; the complex nature of the organizing force itself, the intricate structure of the manner in which all synthetic functions are performed—the complexity of what Kant used to call *"Ich denke"*. This structure is not a generality. It is a specific and personal mechanism of experience which makes generalities practicable and renders isolated facts connected and significant in their own characteristic manner *as experiences*. No fact and no abstraction means anything whatsoever unless, and until, they become part and parcel of that mechanism. "Mechanism" is the wrong word. It is not a machine, not a dead scheme of strains and stresses. I employ here the word "mechanism" only to suggest that, after all, experience *is* a working system, a functioning contrivance, be it of nature or of celestial powers—a contrivance which has deep metaphysical roots as well as the plain, manifest, and empirical surface which is called in all of us (= "me" in plural) "my" consciousness, or "my" experience. It is neither a universal soul, nor an attenuated generality common to all things "within consciousness" (Schuppe). It is concretely, familiarly, and uniquely *I myself* which is nothing else but the manner in which *every* behavioral field is organized.

Philosophical evidence is of a different nature from the scientific conception of evidence. This is not the place to discuss this methodological difference. I will say only this: philosophical evi-

dence is something in the nature of an argument, or reason for, or a different angle of interpretation. Those who have a strictly scientific idea of evidence may call the following lines merely an argument.

Crudely speaking, why do I think that your "I" and my "I" are the same? Strangely enough, I refer to common sense. I maintain that, from a purely empirical point of view, the difference between "you" and "me" is an imaginary one. Suppose you say: "Do you not see that I am different from you? I am sitting in a chair, and you are standing there leaning against the wall." Very well; but this is a difference in location, not in the personality. "Well", you would probably interrupt impatiently, "you are dumb, and I am intelligent. Is that not a sufficient difference in personality?" Of course; but it is a difference, precisely, of our personalities (traits, and habits, and so on), but not in what we both call "I". No matter what empirical difference you may adduce, it will always be a difference in something else, not a difference in "I"—unless you *assume* that behind your word "I", and behind your experience of "I", there is a dark spiritual substance, "your individual consciousness". Disgusted with my metaphysical stubbornness, you would probably say: "Oh, yes! You are right. You are right in the same sense in which an ignorant Buddhist monk is right when he insists, in a similar fashion, on the nothingness of things and persons. Of course, you are right: The 'I' you are speaking about is *nothing*, that is, a plain and unadulterated nonsense." Now this is an easy way of getting out of any difficulty, that is, to take the attitude of "sour grapes"—an ingenious device of frustration to dismiss the issue by simply denying its validity. The strangest thing is that we often succeed in convincing ourselves, not only that the grapes are really sour, but that our desire to eat them is a moral abomination, and that our very appetite for grapes is illegitimate, wicked, and even "meaningless". Despite your impatient dismissal of the idea connected with the word "I", you still use the word, *and you use it precisely in the sense you pretend not to be able to understand*, that is, in the sense in which I and everybody else are using it.

Modern physics teaches us that if a proposition has no empirical basis in fact and observation, and if it is reasonably demonstrated that it *cannot* have any such basis, the distinctions logically arising

from such a proposition are not valid. This principle is the basis for the theory of relativity and other spectacular developments of modern physics. Why not apply it to other fields of knowledge? To psychology, for one? Gravitation is not a property of the material particles. It is a property of a gravitational field. There is a world of difference between those two points of view. There is no, and there cannot possibly be any, evidence for the existence of the *force* of gravitation. Hence to talk about different "pulls" emanating from the sun, or the moon, or the earth, is just bad metaphysics. But does it mean that gravitation does not exist?

Similarly "I" is a descriptive property of a behavioral field and, as a matter of fact, of *any* behavioral field. This is practically a tautological statement. For behavioral field implies egocentricity, just as gravitational field implies gravitation. And the fact that many material particles attract each other does not break up gravitation into separate and mutually impenetrable individual centers. Weight takes care of that. The "I am" of any behavioral field is similarly selfidentical.

But if I am selfidentical, I am *eo ipso* immortal. Immortal not in the sense of departing to the other world and joining some vague entity called a "universal soul"; but immortal in this very world of ours, immortal for this terrestrial bliss and tragedy, for all the pain and happiness of the earth. The terrible part of it is that, no matter what I do, *I cannot escape myself*. What disappears with my death is merely the shell, a certain specific group of experiences, and memories, and anticipations, in a very particular and probably irreproducible combination with one another. That combination disappears, completely and irrevocably, just as West disappears at the North Pole. But I myself, as a unique manner of bringing the experiences together, shall continue to exist. I have to function in exactly the same manner and exactly the same sense of individuality in all the pain and sensual delight of the Universe. I cannot withdraw from its feast.

Ethical implications of this idea are as obvious as they are terrifying. By inflicting any kind of pain on others I literally inflict pain upon myself. Compare two apparently different situations: Suppose (a) that in a dream you have to go through a torture, but when you wake up you have absolutely no memory of it; or suppose (b) that while you are asleep somebody else is tortured. I

ask: what difference does it make *to you?* From a purely empirical point of view the two situations are identical. It is only when you leave the ground of pure experience and *think* of another person as a metaphysically different I-center, that you *assume* that the two situations are distinctly different. If a German Gestapo man flogging a helpless Jew could for a moment be shown what he is *really* doing; if he could be allowed to tear away the mask from the face of his unfortunate victim, he would be terrified by finding himself under the mask. The implication is obvious: Do unto others as you would they should do unto you.

There will be, no doubt, many objections to the position herewith briefly announced, including accusations of banality and futility. For lack of space I cannot deal with all the anticipated objections and difficulties. But one objection I must briefly mention. Most readers may feel that it is difficult, and probably impossible, to figure out how this peculiar identity of manner which we call consciousness is associated with the innumerable organisms variously located in space and time. I reply to this merely by challenging the traditional interpretation as being equally, and even more, difficult. For is it clear and easy to connect "individual consciousness" as a "being" of some sort with the "atoms of the brain"? If the position reformulated in this article (for it is not new) savors of mysticism, the conventional interpretation is nothing but legalized, and therefore unconscious, mysticism.

Now my argument for immortality *in this world* is fairly completed. Clearly it is based on the assumption that we are adverbs. But the possibility that, in some sense, we are nouns is not excluded. This, however, is an altogether different story, and cannot be told in a few pages. But, if I am allowed a little additional space, I would like to present to the reader a few reflections on the theme of the immortality of nouns.

In the first place, there might be a semi-logical and semi-mystical transition from the adverbial existence to the substantival, and further on to the noumenal, existence. The transition might be effected by employing the Hegelian technique in dealing with the categories of the Spirit.

However, Hegel's conception of the Spirit is, I think, entirely *of this world;* it is Shakespearean, not Dantean. But the idea of

the soul—as a noun, and not merely a manner—is, I am convinced, analytically tied up with the idea *of the other world*. If we cannot accept this idea, we cannot believe in the existence of the soul. And, I think, the reason why we do not believe in the existence of the soul, is precisely because we cannot believe in the other world.

Yet it has been pointed out a number of times, even by those positivistically minded, that the possibility of the existence of many disconnected worlds is not logically excluded. But those who, in any sense whatsoever, believe in God must *eo ipso* believe in the existence (a term yet to be defined) of the other world. For God cannot possibly be conceived as just a metaphysical point. His simplicity is not the abstract simplicity of a logically single term. He is a system, *coincidentia oppositorum*. If He is *coincidentia*, He must also have the *opposita*. Hence, speaking in human and terrestrial symbols, He is full of problems and difficulties of His own. And that is the Other World. *He* is the Other World. Probably the Manicheans are right: He is confronted with infinite difficulties and boundless tragedies. The conception of a God who leads a blissful and perfect existence in immediate metaphysical proximity to this world of misery and pain—such a conception is positively a blasphemy. The only excuse for the existence of this world is the other world, conceived not as bliss, but as a stupendous tragedy, the tragedy of existence itself.

If those fantastic symbols can be rendered meaningful by philosophical reflection, then immortality is not to be particularly desired from any selfish point of view. It is immortality for new problems, new difficulties, and new forms of suffering, not immortality for the happy existence ever after. One who chooses, or is predestined, to be immortal must be prepared for a greater hardship, and greater sacrifices, than those he ever had an opportunity to be confronted with *in this world*. Any other assumption renders *this world* metaphysically meaningless. The idea of paradise is outrageously unethical, and wholly un-Christian within Christianity itself.

These final remarks, however, are not intended to be convincing. They are here offered merely in the way of suggestion, in case, perchance, we are not adverbs, but, in some sense, nouns.

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THE THEORY OF TIME IN PLOTINUS

UNLIKE many important themes that are discussed or referred to here and there throughout the Enneads, Plotinus' exposition of his views on time is rather well confined to the tractate *On Eternity and Time*. After the section on eternity the discussion of time begins at III vii 7 with a critique of the most worthy of the previous speculations. An account of Plotinus' treatment of time can hardly escape a threefold division: first, the refutation of non-aristotelian theories; second, the refutation of Aristotle; and third, the exposition of his own theory.

I

All the non-aristotelian theories of time agree in relating time to motion (for no one ever connected it with rest); nevertheless they may be subdivided into three groups. The first of these three types of theory baldly defines time as motion. Under this classification there are some who identify time with all motion and others who restrict it to the revolution of the universe. Since Plotinus according to his usual custom does not name the men, one must search the sources to see whom he had in mind. Aëtius, *Plac.* I 22 7, says that most of the Stoics defined time as motion itself (αὐτὴν τὴν κίνησιν). This may be true of a few Stoics, but Zeno, Chrysippus, and "some" Stoics fall in another group. Bréhier regards Aëtius' remark as a confusion.[1] Aristotle also knew this theory and combats it in *Physics* IV 10, 218b10 ff; but neither is he clear as to who held it. Aristotle also refers to a theory that identified time with the motion of the whole. W. D. Ross's footnote in his translation of the *Physics* understands Aristotle to refer to Plato. Such a representation, however, does Plato scant justice. It is probable therefore that Plotinus had no one definitely in mind, but was following a conventional scheme of approaching the subject. This seems all the more likely in view of the next division to be mentioned.

The second of the three types of non-aristotelian theory, apparently a Pythagorean suggestion, identifies time with the sphere itself. Neither Aristotle, who also mentions it, nor Plotinus con-

[1] *La Théorie des Incorporels* 56-57.

siders this view worthy of discussion; and a conventional scheme better than the subject-matter accounts for its inclusion.

The third type of theory is by far the most important, and its exponents can be identified. In general the position is that time is something related to motion. This something may be the interval of motion, or the measure of motion, or it may be a concomitant of motion. In each of these three subdivisions of this last type of theory, the motion involved may again be all motion in general or a particular, regular motion. In reality this third type includes all the foremost philosophers. Archytas had defined time as the number of a given motion or in general as the interval proper to the nature of the universe. Plato in the *Timaeus* vaguely makes time some concomitant of motion. Aristotle himself makes it the number or measure of motion. Zeno said time was the interval of motion and a measure of swiftness and slowness. And Chrysippus defined it as the concomitant interval of the motion of the world.

Each of the three types of theory, or at least the first and third, including all the subdivisions of the third, is refuted. To the first type of theory, that which identifies time with motion itself, Aristotle and Plotinus both give short refutations. A comparison shows that a basic characteristic of time underlies them both. Plotinus' first argument is as follows: Motion, whether all motion or a particular motion, is in time, and that in which the motion is must be different from the motion itself; therefore time is not motion. These few lines, formally logical, are too brief to escape all suspicion of being a merely verbal argument, and strengthen the supposition that Plotinus is following a conventional scheme. Comparison with Aristotle's discussion of time raises the question of the exact sense of a motion's being in time. In the *Physics* IV 12, 221a4, Aristotle says that to be in time means to be measured by time. He had previously said that not only is motion measured by time but, conversely, time is measured by motion, because they define each other (220b15). From this it may be concluded that time is in motion also. But if each is in the other, how can Plotinus be sure of the validity of his argument? There is nothing in this that would prevent time and motion from being really the same and differing only in εἶναι. Yet this sort of difference will not satisfy Plotinus' system. Or has Plotinus some non-aristotelian meaning

for the notion of being in time? When Aristotle, on the other hand, wishes to argue against the identification of time and motion on the basis of what motion is in, he follows a different procedure. He argues that the motion of a thing is *in* the thing, and is *where* the thing is; but time is everywhere; and therefore time is not motion (218b10). Plotinus takes no account of this argument, and his substitute for it seems to be less satisfactory.

Plotinus next indicates that there are many arguments against the theory; one, however, is so convincing that no other need be developed. Motion can stop and can be intermittent, but time cannot. Time therefore cannot be motion. To the obvious reply that the revolution of the sphere is not intermittent Plotinus answers that the revolution returns to the same point in a given time, but does not return to that point in half the time, although both the complete motion and the half motion are the motion of the universe.[2]

This argument seems to be little more than a confusion between the continuous revolving of the sphere as time itself and a single revolution as a unit of time. Yet Aristotle used a similar argument. In 218a34 ff one finds: "Some say time is the motion of the world . . . although even the part of a revolution is a certain time, but it is not a revolution."

How is it that both Aristotle and Plotinus believe they have disposed of the theory by an objection resting on equivocation? The remarks that follow in both authors give a slim clue to the puzzle. Aristotle adds that, in case there were several heavens, the revolution of each would be a time; and there cannot be several times at the same time. Plotinus continues to the effect that allowing the external sphere to have the most rapid motion while the inner spheres are slower ruins the theory under discussion. How does it?

Perhaps what both Aristotle and Plotinus mean to say is this. The motion of one sphere has no more claim to be time than the

[2] Mackenna's translation of these lines is amazing. "If the reference is to the Circuit of the heavenly system (it is not strictly continuous or equable, since) the time taken in the return path is not that of the outgoing movement; the one is twice as long as the other: this Movement of the All proceeds, therefore, by two different degrees; the rate of the entire journey is not that of the first half." Aside from questions of Greek grammar one may ask what sort of astronomy is involved in this translation.

motion of any other sphere. Therefore time cannot be motion, for there cannot be several times. In other words, both Aristotle and Plotinus reject the identification of time with motion because they do not believe it does justice to the unity of time. Aristotle will then preserve that unity by making time the measure of motion and by arguing that the measure is one even when the motions differ. Plotinus will aim at the same result, but in his own way.

Consequently, with the unity of time forming a major consideration in his mind, Plotinus allows his express argument to be more verbal than valid.

In the course of this unsatisfactory logomachy, Plotinus inserts a cryptic note anticipatory of his own theory. Less formal but more substantial, its successful defense would remove all need of other refutations. While it is true that the motions envisaged in this type of theory occur in time, there may be, he hints in III vii 8, 4, a motion that does not occur in time; and if this is so, time and motion are still further separated. What such a motion could be, he does not say at this point in the argument. Later (III vii 11, 15-20) he speaks of a Nature which after rest wished to rule herself and so sought a better state; she moved, and after moving somewhat she engendered the image of eternity, time. This motion of the Soul is perhaps what Plotinus has in mind. Elsewhere he says time has its existence in the activity of the soul—how could it be otherwise? But souls are not themselves in time; only their affections and productions are; time is posterior to souls; for what is in time is inferior to time.[3]

After Plotinus, a motion prior to time was a theme with a long history. Simplicius' account of Damascius mentions, not some activity of the Soul, but the generation of the Soul as a motion preceding time.[4] This generation is neither the immutability of the higher eternal Beings, nor the ordinary time of this lower world, but an intermediary, which the Scholastics later paralleled with their *aevum*. These developments are not found in Plotinus' text, but they form a commentary upon an obscure remark.

Plotinus' next concern is the Stoic theory or theories. Zeno had defined time as the interval of motion, a measure of swiftness and

[3] IV iv 15.
[4] Pierre Duhem, *Le Système du Monde* I 264 ff.

slowness. And this seems to have remained the common Stoic view. Chrysippus, however much he might have been honored on other points, did not win the assent of the school by restricting Zeno's definition to the motion of the world, for this restriction seemed to conflict with other Stoic tenets. Stoicism was one in holding that the world begins and ends in a conflagration, but time does not. Hence if time is the motion of the world, either time began or the world is everlasting. And neither of these could be admitted. But since Archytas as well as Chrysippus had defined time as the interval of the universal revolution, Plotinus, while he attacks Zeno's position, places more emphasis on this latter view.

Time cannot be the interval of motion because there is no one interval. Even in motion specifically the same,[5] for example motion in space, there is no single interval. A unit that measures, but is different from, all intervals would have a better claim to be called time. Even if time is defined as the interval of regular motion,[6] it cannot be the interval of all regular motions, for there are many such. Consequently this definition implies the impossible conclusion that there are many times.

If the notion of interval is to be used at all, it must be restricted to one, and the interval of the world's motion has the only *prima facie* claim to consideration. The precise significance of the word *interval*, however, is unclear. If it is an interval in or of the motion itself, then it is of the nature of motion only and is not time. If, on the other hand, interval refers to a quantity, it is a measure of space and is not time.[7] Or does the revolution have an interval because it never ceases but always repeats itself? But this is multiplicity of motion; it is not time. In this revolving again and again, the multiplicity is merely a number like two or three, and

[5] III vii 8, 24. Mackenna translates this as continuous motion; and Liddell and Scott, 1940, cite this passage as evidence for understanding ὁμοειδής as continuous. Bréhier, however, is correct in writing "d'espèce identique", as is shown by the καί in the following illustration, καὶ ἡ ἐν τόπῳ. For another case in which Liddell and Scott unfortunately depended on Mackenna, *cf.* my note, "A Reference to Plotinus in Liddell and Scott", in *The American Journal of Philology*, 1944.

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the interval is an interval of space. Thus quantity of motion, either as a number or as an interval in space, is found, but time itself is not found. The quantity merely occurs in time, for otherwise time will not be everywhere; it will exist only in the substratum motion, and this brings us back to the discarded definition that time is motion.

An unwary defender of the theory might seek refuge in saying that it is not exactly the interval of the motion itself that is time, but the interval along which the motion progresses, an interval which also progresses with the motion. Undoubtedly this is the truth; such an interval is time; but the statement is purely verbal and is devoid of information. The original question was, What is time? And the answer has now become, Time is motion's interval in time. An interval in time would be understandable if time were first discovered.

There remains the further difficulty that, if time is the interval of motion, it is not clear what an interval of rest would be. And a frequent defect in previous theories is their failure to relate time to rest as well as to motion. The Stoic theory therefore proves to be untenable.

II

In chapter nine Plotinus turns his attention, without mentioning a name, to Aristotle's theory that time is the number, or, better,[8] the measure of motion. Before launching into the main criticism, he attempts to dispose of a relatively minor point. As he did with the definition of time as the interval of motion, Plotinus again raises the question whether time can be the measure of all motion or of regular motion only. He asks, expecting a negative answer, how irregular motion could be measured. Since Aristotle explicitly included all motion in his theory, this point, though subordinate, ought not to be omitted. On Aristotelian principles the irregular motions are alteration, growth, generation, and some motions in place.[9] At first sight it would seem that irregular motions in space

[8] In line 1 βέλτιον does not mean *plausible* as Mackenna tries to interpret it. The fact that motion is continuous does not make this definition more plausible than the theory discussed in the preceding chapter; but it makes *measure* a better term than *number*.

[9] The problem of irregular motions and of Aristotle's view is complicated by an apparent discrepancy in Aristotle. When defining time, Aristotle thinks

can be measured as easily as irregular solids. Irregular motions in space are such because the body changes its direction or velocity, so that what is colloquially one motion is strictly a composite of two motions. But each of these two is regular,[10] and the gross irregular motion could be measured by combining the measurements of the parts. The other types of irregular motions, such as alteration and growth, proceeding as they do by discontinuities, may be impossible of measurement, so that on the whole, with but the one possible exception, Plotinus' rhetorical question may be justified.

But the one exception still causes difficulty. Aristotle had said that to be in time means to be measured by time. Now, if an alteration is strictly a series of discontinuous states, it may not be in time or be measured by time; but one must suppose that Plotinus would have admitted that irregular motions through space occur in time, and, if this is so, they must be measureable. To defend the denial that irregular motions can be measured, it would be necessary to give a new meaning to the phrase "to be in time". A little later, in the first half of chapter twelve and in 13, 1-3, Plotinus does in fact impose a different meaning on the phrase. To be in time comes to mean to be produced by an activity that is time or that produces time. From this it follows that the revolution of the sun is in time; nevertheless the revolution is not measured by time, or is measured only accidentally, while time is directly measured by the revolution. And further, time is in nothing else; but if "to be in" means "to be measured by" it would have to be in the motion that measures it. Unfortunately nothing in this changed view of the phrase would prevent irregular motions from being measured in the same sense in which regular motions are measured. Therefore the difficulty of justifying Plotinus' question remains, and the only defensible conclusion to this introductory remark would be that an irregular motion, which for that very

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of growth and alteration as continuous (223a29-223b1). And if so, they are regular. On the other hand, he holds that alteration is discontinuous: *Phys.* Z 5, 236a35-b18; *Phys.* H 3, 248a6-9. If the former statement is accepted, it is difficult to imagine any irregular motion, so that Plotinus' objection does not apply; if the latter view is emphasized, the discussion seems to follow.

[10] Constant acceleration of gravity prevents the freely falling body from moving regularly in any finite time; but this type of motion is beyond the scope of both Aristotle's and Plotinus' thought.

reason must be composite, cannot be the unit of measurement. Such may have been in Plotinus' mind, for, while in a later passage he clearly distinguishes between the questions What is time? and What is the unit of time?, in this criticism of Aristotle the arguments evince some shifting and confusion between them.

With irregular motions presumably disposed of, the main purpose of chapter nine is to refute the Aristotelian definition that time is the number or measure of motion. Bréhier's footnote at the end of the chapter in the Budé edition says, "Tout le chapitre est une critique de la théorie d'Aristote, exposée dans la *Physique* IV 11-14, que Plotin suit dans tous ses détails. . ." This note puts the matter too strongly. Plotinus does not follow Aristotle's exposition in all its details; he chooses rather to attack the one main point.

The object then of Plotinus' criticism is the definition that Aristotle placed at the end of *Physics* IV 11: "Time is the number of motion with respect to before and after, and is continuous because it is an attribute of something continuous." In arriving at this definition, Aristotle had said that the number which time is, is a number in the sense of what is counted, not the number with which we count.[11] And to illustrate he says that the number of a hundred horses and a hundred men is the same, but the things numbered are different.

It is not surprising that Plotinus argues against identifying time with the number by which we count. In this he is merely repeating Aristotle. But what is surprising is that the chapter as a whole does not get much beyond this denial that time is a digit, and the uncomfortable question arises, Did Plotinus completely misunderstand Aristotle? At any rate it can hardly be said that this chapter meets the Aristotelian position squarely.

To begin his refutation of the view that time is the number or measure of motion, Plotinus draws a parallel between ten horses, ten cows, ten quarts of wine or wheat, and, on the other hand, ten measures of motion. This analogy shows, as Aristotle admitted, that the number ten as such is no more time than it is a horse. To

[11] ὁ δὲ χρόνος ἐστὶ τὸ ἀριθμοῦμενον καὶ οὐχ ᾧ ἀριθμοῦμεν. 219b7-8. *Cf.* 220b8 ff. ὁ δὲ χρόνος ἀριθμός ἐστιν οὐχ ᾧ ἀριθμοῦμεν ἀλλ' ὁ ἀριθμοῦμενος.

understand number in this sense does not enlighten us on the nature of time. If, however, time is not the ten, it may be the quart, that is, it may be a measure which has a nature of its own apart from the wheat or motions measured. Let there be then an analogy between ten quarts of wine and ten measures (hours) of motion. The definition therefore identifies time with this measure. It is a quantity.

The analogy, however, suggests to one an obvious objection, for the measure of time (an hour) is not time itself but a unit of time, just as the quart, the measure of volume, is not volume itself, but a unit. The selection of a unit cannot define the nature of the thing in question. Since a quart is a limited volume, as an hour is a limited time, volume and time must first be defined before quart and hour mean anything. This is a legitimate objection, and, to be sure, Plotinus eventually raises it. He repeats it with emphasis later at the end of chapter twelve. But here in the first part of chapter nine it must be discovered between the lines, while the emphasis remains on the false concept of time as a digit.

In examining the suggestion that time is a quantity, Plotinus first (line 19) changes his analogy. The quantity, instead of remaining a quart, becomes a line along with the motion.[12] In this case, he argues, there is no more reason why the line should measure the motion than why the motion should measure the line. This may well be true, but, unless Plotinus shows that such a reciprocal relation cannot exist between time and motion, the point serves no purpose. Aristotle admitted that we measure motion by time and time by motion, because they define each other (220b15).

Plotinus next objects that such a line more plausibly measures the particular motion it accompanies than motion in general. In this he is deceived by his illustration. A concrete line, a given path, may accompany but one motion; but time accompanies all. This defect in the illustration should not have been pressed to serve as a general argument. And further, it fails to meet Aristotle because

[12] Line 20: Bréhier translates: "Mais comment cette ligne, si elle progresse avec le mouvement, mesurera-t-elle ce qui l'a fait progresser?" Bréhier assumes that motion causes time to run along, but the text carries no such hint. It merely means: "how can it measure that with which it runs along?" Ἀλλ' αὕτη συνθέουσα πῶς μετρήσει τὸ ᾧ συνθεῖ;

Aristotle gave a reason why the same time can measure two motions (223b1 ff.). It is this argument that Plotinus should have answered.

Plotinus next attempts to amplify the position that time is a quantity. Time in this theory is not a measure apart from motion but a measure along with the measured motion (line 24). The motion will be that which is measured; the quantity will be that which measures. Neither one seems to Plotinus to be time, and he makes a suggestion anticipatory of his own theory, that that which uses the measuring magnitude is time.

Finally to dispose of the view that time is a quantity, he offers the following consideration. If time is motion measured by magnitude, and if motion cannot be measured by itself, and if therefore there must be a measure other than motion—a continuous, not a discrete, measure—then it follows that this measure or magnitude must itself be capable of being measured, if the quantity of motion is to be measured. Time therefore will be, not the magnitude running along with the motion, but the number of that magnitude. This results, however, in a digit like ten, and can refer at best to a portion of time like an hour. But time is not a portion of time.

It begins to appear that this chapter against Aristotle contains two types of argument. There are those which are sound but which do not meet Aristotle's position squarely, and there are those which meet Aristotle squarely but are not sound. The rejection of the digit and the distinction between time and a unit of time may be legitimate, but neither the one nor the other undermines Aristotle's position. Aristotle explicitly rejects the former, and as to the latter he implies the same distinction in several sections (*e.g.*, 220a32-b22), though perhaps not so clearly as Plotinus desired. On the other hand, the part of Plotinus' argument that seems to meet Aristotle's position is the part that is not so obviously legitimate. Let us assume a continuous measure accompanying the motion like a line: the fact that this line can itself be measured or numbered does not show that it cannot be time, for time as well as motion can be measured. This measurement no doubt would be expressed as ten hours of time. The digit ten is not time, nor is the unit hour; but contrary to Plotinus' criticism these facts do not show that the magnitude accompanying motion is not time. At

best they show merely that the limited magnitude accompanying the limited motion can be only a portion of time and not time in general.

In addition to this, when Plotinus argues that the magnitude running along with the motion cannot be time, for the reason just discussed, but the number which measures the magnitude may be, he entangles himself in his own reasoning. The accompanying magnitude could not be time because it could be measured; now why cannot that which measures it be capable of being measured also? And so on to infinity, so that nothing in this series could be time.

The latter part of this chapter, from line fifty-four on, is as confused as the preceding. He begins by restating the definition: time is that which placed alongside of motion measures it according to before and after.

An obvious criticism of this definition would be that before and after are temporal terms and cannot be given meaning until time itself has been defined. Furthermore, this criticism would meet Aristotle squarely. Aristotle had said:

> The distinction of before and after holds first of all for place. It holds here because of position. Since before and after hold in magnitude, of necessity they are also found in motion. For the distinction in the latter case is analogous to that in the former. But indeed before and after also hold in time, because each corresponds to the other (219a14 ff).

True, here Aristotle tries to avoid using temporal terms in his definition of time by referring before and after to space. But no one could have objected to Plotinus, had he questioned whether Aristotle surreptitiously passed from a spatial concept of before and after to a temporal concept. Instead of following this line of attack, however, Plotinus merely objects that "that which" is an unsatisfactory description. To say time is that which measures motion leaves it still unclear what it is that measures.

He virtually repeats his previous consideration by saying that a thing that measures motion must measure according to time and therefore it cannot be time itself. But why must this thing measure *according to* time in such a sense that it cannot itself be time? One must admit either that time in a sense measures according to time (and this seems possible), or that the thing which measures can itself be measured by something else and so on back to an impossible infinity.

This chapter as a whole seems to be mainly an obsession against the digit theory of time. Its defensible points are those introduced only incidentally. In addition to the ones mentioned above, there are two more legitimate considerations at the end of the chapter. The first is the argument that time exists before any (human) soul numbers or measures motion. On this point Plotinus noticeably improves on Aristotle. The second point is the brief assertion that, since time is infinite, it cannot be a number.

The analysis of this chapter has put Plotinus in a poor light. Can it be that he was confused, or stupid, or just dozing? The explanation is, not that he was confused, but at worst that he was careless and unsystematic. Chapter nine, the ostensible refutation of Aristotle, seems to fail; but chapter twelve, ostensibly an exposition of his own position, shows clearly the reasons for rejecting the Aristotelian position. But more fundamental than the explicit criticisms of Aristotle in chapter twelve is another explanation of the carelessness of chapter nine. Plotinus believed he had a better theory, a theory that could stand on its own merits without the support of arguments demolishing Aristotle. Of course, it was customary to point out mistakes of predecessors, but so superior was his positive view that he could afford a perfunctory criticism of others.

The final attempt to dispose of previous theories is the short and equally unsatisfactory argument which forms the first part of chapter ten. The view there considered defines time as an accompaniment of motion. Whom Plotinus had in mind is not clear; the definition is similar to, but broader than, that of Chrysippus, and might possibly include the view of Strato. The objection raised against it seems to be the impossibility of defining "accompany" or "to follow" before time is defined.[13]

Plotinus then insists on asking whether the proposed accompani-

[13] The text is difficult. Plotinus says παρακολούθημα means nothing πρὶν εἰπεῖν τί ἐστι τὸ παρακολουθοῦν. So far there is no difficulty and the interpretation I have given seems simple. But the next phrase is: ἐκεῖνο γὰρ ἂν ἴσως εἴη ὁ χρόνος. How does this explain the objection? Bréhier calmly omits this phrase from his translation. Mackenna, seeing in the ἐκεῖνο something distinct from τὸ παρακολούθημα, translates τὸ παρακολουθοῦν in the πρίν clause as causative: "we learn nothing from this . . . until we know what it is that produces this sequential thing; probably the cause and not the result would turn out to be Time." This gives some sense to the ἐκεῖνο γὰρ κ.τ.λ., but it puts a strain on the preceding phraseology.

ment follows after, simultaneously, or before. In any case, it is a temporal following.[14] And therefore the definition is circular, reducing to this: time is an accompaniment of motion in time. This is the climax and conclusion of Plotinus' perfunctory refutations. He was perfectly well acquainted with the logical sense of "follow", and in fact he uses it below on the same page (11, 6). But by this time he had begun his positive exposition.

III

As one would expect, Plotinus' positive theory of time is a consequence of his basic worldview. Whatever adverse criticisms may be made against Plotinus, no one can deny that to a high degree of philosophic consistency he succeeded in solving detailed problems by relating them definitely to his first principles. So true is this that it might seem unfair to criticize his theory of time, or of any subsidiary point, by arguments drawn directly from phenomena; one ought, so it would seem, to test the rigor by which consequences are derived from first principles, and, if satisfactory, either approve those consequences or argue against the principles on high metaphysical grounds. This method of procedure, always a valid one, seems particularly applicable in the case of Plotinus because of the prevalent impression that he was not mainly interested in saving appearances, so that to appeal to appearances seems to be taking unfair advantage of him. Now, however much Plotinus in some of his moods may contemn affairs mundane, and despite the apparently radical separation between the higher and the lower worlds, his system has in reality but one universe, continuous from top to bottom, from inside out. And while the phrase "to save appearances" may not be sufficiently elevated in tone, it remains true that the first principles of Plotinus, who is as anxious to persuade as to prove, will be convincing only if they can produce plausible accounts of lower things. Conversely, a criticism of a subsidiary theory, drawn directly from phenomena, is a consideration by which to judge even the ineffable One.

Eschewing all physical views of time, Plotinus begins his account with a description that derives time from the Soul. Perhaps

[14] ὅπως γὰρ ἂν λέγηται, ἐν χρόνῳ λέγεται.

the initial description leading up to what is apparently a formal definition deserves translation:[15]

When previously before this generated the previous and needed an afterwards with it, time was resting in being and did not exist, but was itself resting quietly in that being. But an officious Nature, desiring to rule herself and to be independent and choosing to seek a fuller existence than her present state, started to move, and it [time] started too; and in the direction of everlasting succession, the posterior, the not-same but different and different again, moving a certain distance of the journey we[16] produced time, having made it an image of eternity. For since in the soul there was a restless power that always wished to change what it saw there into something else, it did not care to have the whole solid completeness [of the ideal world] present with it; but just as from a seed at rest the logos unfolding itself makes an escape into multiplicity, as one would say, exhibiting the multiplicity by partition, and advances a distance to greater weakness by consuming the unity that is not in itself for the sake of its own unity; so also this power in making the visible cosmos in imitation of that one—the motion here is not that which is there, but it is similar to that which is there and wishes to be its image—first made itself temporal, having made this[17] instead of eternity. Then it handed over this world to be a slave of the time so produced, having made it to be entirely in time and having encompassed all its evolutions in time, for the world moves in the Soul—there is no other place in the world for it than the Soul—and its motion is in the time inherent in the Soul. Displaying her activities one after another in an always changing succession, the Soul begets succession with her activity, and with another act of reasoning after a former one she brings forth what previously did not exist, because neither the act of reason that was produced nor the present life of the Soul is similar to her previous state. Along with the different phase of life, and by that very fact, there was a difference of time. A difference of life therefore took time, and the everlasting forward motion of life takes everlasting time, and the life that is past is past time. If therefore anyone should say that time is the life of the Soul in the motion by which it changes from one phase of life to another, he would have the right idea.

In addition to this main account, it should be added that the changes in the life of the Soul are uniform, similar, silent, and continuous (12, 1-3).

Time then is defined in terms of the life of the Soul, a type of change no doubt, but a type superior to the motion of physical objects. One does not get to the bottom of things if one's attention

[15] III vii 11, 12-45.

[16] Bréhier simply translates εἰργάσμεθα, "*they* made". This would refer it simply to that Nature and time as yet at rest. Mackenna better explains the first person plural as "the human souls as summed up in the principle of developing life, the All Soul".

[17] τοῦτον may refer grammatically to κόσμον αἰσθητόν or to a supplied χρόνον.

is arrested at the motion of inanimate bodies, for their motions are imitations of the Soul's motion and they are caused by it. One must go deeper than physical motion because motion requires a spontaneity not found in the inanimate realm. The motion of the universe therefore must be explained in terms of the motion, *i.e.* the life of the Soul. Because the Soul produces both time and the world, this view explains why physical motion is in time, while the Soul's life is not in time (13, 30-47).

The test of this general view will now be how well it can solve the problems that arise. But before these are examined, a little clarification of the general statement may be in order with respect first to the definition itself and second to the allegation that time is an image of eternity.

Time, Plotinus has argued, depends on the differentiation of the life of the Soul. The Soul functions and produces time. But has Plotinus set off this particular function from others that the Soul may have? The Soul generates whatever is below it in the cosmic hierarchy, it produces the sensible world, and in particular it gives rise to space or extension. For as time is a function or quality of the Soul, so space or magnitude is a quality of body. The Soul therefore imposes the form of magnitude on the sensible body.[18] As time is an attempt to disperse the ideal unity,[19] so the Soul in producing sensible objects disperses the unity of their form.[20] If this function may be roughly called space, the question arises, does Plotinus distinguish sufficiently between these two functions? Does Kant, even, distinguish between space and time? Is it possible for anyone to do so without becoming involved in a vicious circle?

It was noted that Plotinus in chapter nine failed to criticize Aristotle for passing surreptitiously from a spatial to a temporal concept of priority. The reason for this failure may be that Plotinus recognized himself to be open to a similar criticism. In 11, 36-38, he uses the words μετά twice, ἐφεξῆς twice, and πρότερον. If the second of these is taken in its usual spatial significance, Aristotle's fault reappears. If taken in its less frequent temporal meaning, then it as well as the other two words, though temporal,

[18] III vi 12 and 16-18.
[19] I v 7.
[20] III ii 17, 1-5; V i 2. *Cf.* III ii chapters 2, 14, and 16; and I i 8, 15-23.

has no significance until after time has been defined. They should not be used in the definition itself. And if the third word is not temporal, it must refer to a logical priority that does not clarify the concept of time. In fact, Plotinus, Aristotle, and everyone else seems to be impaled on the horns of a painful dilemma. Either the terms used in defining time are temporal, in which case they do not furnish but presuppose the definition; or the terms are not temporal, in which case there is a surreptitious passing from space to time.

Kant in his *Inaugural Dissertation* III, 14, 1, writing against the empiricists, asserted, ". . . succession does not beget the concept of time, but presupposes it. Thus the notion of time (regarded as acquired through experience) is very badly defined in terms of the series of actual things existing *after* one another." Do these words of Kant apply to Plotinus? They may not altogether apply, inasmuch as Plotinus was not a British empiricist. If in Plotinus our souls are one with the Soul, then we have not a sensible but an intimate, *a priori* experience of that life which is time.

Kant, however, in replying to Leibniz, rejected a succession of internal states on the ground that it was as vicious as a succession of external events. And he continues with a sweeping condemnation of this whole method of procedure:

> So far is it from being possible that anyone should ever deduce and explain the concept of time by the help of reason, that the very principle of contradiction presupposes it, involving it as a condition. For A and not-A are not incompatible unless they are judged of the same thing *together* (*i.e.*, in the same time); but when they are judged of a thing successively (*i.e.*, at different times), they may both belong to it. Hence the possibility of changes is thinkable only in time; time is not thinkable through changes, but *vice versa*.

But does Kant escape his own objections? Or does he escape them only by refusing to define time? His descriptions of time, at any rate, use words that presuppose the thing described. If then these considerations apply to all philosophers, Plotinus is not peculiarly unsuccessful and was perhaps wiser than Kant in not using this type of objection against his predecessors.

The second point mentioned above for consideration was the assertion, of Platonic origin, that time is an image of eternity.[21]

[21] *Cf.* I v 7. Time is an image of eternity because it disperses a unity. The Soul attempts to do away with the permanence of its intelligible model.

This is parallel with the view that the world as a whole is an image of its intelligible model. Perhaps it is more than parallel, for not only the things of the sensible world are temporal, the Soul is too.[22] In the quotation from chapter eleven it was said that the Soul made herself temporal, and thus the Soul, or at least the life of the Soul, is an image of eternity. What can image mean?

When Plotinus attempts to compare time and eternity, instead of signaling similarities, all his remarks are points of dissimilarity. Immediately following the quotation above there is this:

> For if eternity is life at rest, the same, unchanging, and infinite, then time must be an image of eternity, as also this world is related to that one; and instead of the life yonder, there must be another life belonging to this power of the Soul, called life by a homonym, and instead of intelligible motion a motion of a part of the Soul, instead of sameness, similarity, and permanence, there must be that which does not remain the same but is in changing action, instead of spacelessness and unity an image of unity—the unity in continuity—instead of the infinite and whole that which proceeds to infinity by a continual succession, and instead of a compact whole the whole which by parts is always future. For thus it will imitate the compact and infinite whole, if it wishes always to add to its being. For thus even its being imitates the being of that world (II, 45-59).

In this explanation of imitation the emphasis falls on the dissimilarities between the two worlds. In particular the life of the Soul and the unchanging life of eternity can both be called life only homonymously. Aristotle's illustration of homonyms, a man and his portrait, allowed for imitation, for the portrait resembles the man in color, in shadow, in expression, in profile; but Plotinus points out no such similarities between eternity and time—it is all difference. Now this is of importance; perhaps it is of too profound importance for treatment in an article on time, for, if time is in no clear sense an image of eternity, then the more basic similarity of this world to the higher world may also be devoid of meaning. And this would take us far beyond a narrow discussion of time.

There is, however, an interpretation that rescues the system from inherent meaninglessness, even if it makes of imitation a literary metaphor. Although the text says that the Soul after a period of rest chose to seek a fuller life and started to move, the truth is that this curious power of the Soul has always been active.

[22] III vii 11, 30, should be understood in consonance with the reference to IV iv 15 mentioned in section I above.

The origin of time, though described in temporal language, is, rather, a matter of logical derivation (11, 6). The Soul was never eternal and motionless (12, 5-6). The problem of an alleged temporal origin of the world is raised concerning Plato also, but Plotinus is clearer than Plato that time and the world never began; they are derived logically from higher stages of the hierarchy. This means that the Soul and the higher world are just deeper, more universal, more permanent aspects of the one and only world that exists, and what is grasped by sensation, referred to as this world in contrast to over yonder, is nothing but the transitory and superficial characteristics of that same one and only world in existence. The Soul is the life and motion of the world, while the Ideas and the One are its static "architecture". If this interpretation be correct, then there is no need for the lower to be the image of the higher except by a pleasant, literary metaphor.

Now, if Plotinus' description of time is no more vicious than any other, and if the notion of imitation does not rob the system of meaning, the general theory may now be applied to a few specific problems. Four, or perhaps three, particular problems with regard to time seem to have occupied Plotinus' attention: time as a measure both of motion and of rest; the unit of time; and the unity of time.

There must be some sense in which time is a measure, even though the Aristotelian theory is inacceptable. Plotinus had already made a formal, though unsatisfactory, criticism of Aristotle; here in explaining how time and motion are measures, he meets the Aristotelian position squarely. In fact, chapter twelve makes chapter nine superfluous. The chief faults with the theory that time is the measure of motion are these two: time cannot be a measure of motion and motion a measure of time in the same sense, though Aristotle made no distinction; and, second, the insistence on motion leaves unexplained how rest may be measured by time.

The first point Plotinus wishes to make is that time is essentially not a measure at all. In Aristotle's eyes the fact that time measures something is an integral part of the definition. Time is counted motion. This is true to such an extent that time would not exist, were there no soul to do the counting. But Plotinus has al-

ready said (9, 78-84) that time's existence does not await our counting; and, instead of time's being a measure or unit of motion, it is more true to say that motion measures time. Let him speak for himself:

> The interval from one sunrise to the next is equal to an interval of time, and since the type of motion on which we depend is uniform, we use it as a measure. But it is a measure of time, for time itself is not a measure. How could time measure anything, and, if it could measure, of what would it say, this is as big as I am? What is this I? Of course, it is that according to which the measuring is done. Therefore time exists in order to measure, but not as a measure. The motion of the universe is measured according to time, and time is not the measure of motion essentially; but being something else first, it will accidentally indicate the quantity of motion. And by taking a single motion in a given time and counting it repeatedly, the notion of a quantity of time past arises. Consequently it is not absurd to say that motion and the celestial revolution measure time after a fashion—insofar as this revolution can indicate the quantity of time by its own quantity—for we cannot grasp or understand temporal quantity in any other way. That which is measured, *i.e.*, made manifest, by the celestial revolution is time; but time is not produced by the revolution—it is made manifest. And thus [time, which Aristotle calls] the measure of motion is that which has been measured by a determinate motion [the revolution], and since it is measured by this, it must be different from it. As measuring, it is one thing; as that which is measured, it is another; for it is measured accidentally. A parallel situation would exist if one should define magnitude as that which is measured by a foot rule without saying what magnitude was in itself. Or it is as if one, unable to define motion because of its limitlessness, should say that it is that which is measured by space. For taking a space that the motion traverses, one might equate the quantity of motion and the quantity of space.[22]

Time, then, is not essentially a measure, though it measures motion accidentally. More important is the fact that motion measures time with the celestial revolution as the unit. The difference between Aristotle and Plotinus may be expressed, though perhaps in a sharpened form, by saying that for the former time is the measure or unit of motion, while for Plotinus motion is the unit of time (13, 9-10). Aristotle adds that time is measured by motion, but fails to see that this is purely accidental. He ought not to have it both ways; motion and time cannot define each other.

This criticism of Aristotle had been anticipated in chapter nine where Plotinus briefly says time cannot be a number because time is infinite. It was said to be one of the legitimate considerations of

[22] III vii 12, 33-61.

that chapter because it is based on the notion that anything measured or counted must be finite; and, since time is infinite, it cannot be measured motion.

Further, to measure is not to produce, as Aristotle seems to imply when saying time cannot exist before it is counted, but to make manifest. Therefore the rotation of the heavens is not to be taken as the cause of time. Quite the reverse: the Soul made both time and the sensible universe, put the latter into the former, and therefore, since the sensible universe has no other place except the Soul, it moves in the time that belongs to the Soul (11, 28 ff).

This clarifies the question of rest also. If the celestial sphere should be conceived to stop and rest, the length of the rest would be measurable if and only if the Soul continued to act. If the Soul should cease its activity, there would be no time—and no world, either. But by rest is ordinarily meant the states of rest of things in nature. These rests are just as measurable as are the motions of things, and while Aristotle made provision for measuring rests (221b7), he erred slightly in reducing such to merely incidental measurements. The measurement of rests should be placed exactly on a line with the measurement of motions. On the other hand, it is obvious that motions call time to our attention more forcibly than rests.[24]

The preceding quotation with its context also solves the relatively easy problem of the unit of time. If time is to be measured, rather than to measure, and if time cannot measure itself, and if it is impossible to determine time by the Soul alone, obviously a uniform motion must be selected as a unit of time. Plato, as always, was therefore correct in saying that the stars were begotten to manifest time, to mark its divisions, and to make it measurable. Therefore the Soul produced day and night; these give the number two; and from two come all numbers, so that measurement is possible. The diurnal motion of the sun is therefore the unit of time,[25] but to define time by that motion is as absurd as to define space or magnitude by a foot rule.

The last question that Plotinus felt obliged to answer on the basis of his general theory of time was that of the unity of time. Plato had spoken of many times, but obviously he meant many

[24] 12, 15 ff; and 13, 1 ff.
[25] *Cf.* VI v 11, 14-21.

possible units. There is a time for Jupiter, and another for Mercury or Venus. These are their periods and are simply possible units, not so convenient as the day and the year. Time itself must be one. Those who defined time strictly as the motion of the sphere —had their theory been otherwise acceptable—would at least have preserved the unity of time; it is not so clear that Aristotle, who insisted on making time the measure of any and every motion, has succeeded so well.

The interest in this question goes beyond the study of Plotinus as an ancient philosopher. Kant faced the same problem, and yet he may not have seen it so clearly as the great Neoplatonist. In opposition to British empiricism Kant argued that time was no discursive concept, but an intuition, a single thing. There is but one time. Or it may be more correct to say that for Kant the idea of time is the idea of a single object. But it remains unfortunately true that there are many human beings, each with an idea of time. Kant fails—so I would hold—to unify these numerous ideas so as really to make one time. Kant is usually credited with many profound passages, even if some are inconsistent with others; but there is one passage whose conclusion, though absolutely essential to his theory, is far too weighty to be supported on the frail scaffolding that underlies it. This section (B 167-169) is that in which he makes impossible a real unity of time, space, and the categories as well. The argument, or should one say the assertion, is directed against any preformation system that would unite all minds and all nature under the plan of the Creator. Because of his rejection of Leibniz' view, involving rejection of any form of theism or pantheism, Kant is left with a pluralistic universe in which each person has his own space, time, and categories. It might be convenient for all these minds to agree, but it is difficult to see that Kant has provided any basis for agreement.

Thus Kant began with time in the individual mind and failed to achieve unity. Plotinus, on the contrary, begins with the unity of time as the life of the Soul and faces the problem of getting it into each individual mind. "Is time then in us also? It is in every such soul and is similarly in all, and all souls are one. Therefore time cannot be broken apart, anymore than eternity can, though contained in all the eternal beings."[26]

[26] 13, 65-69. This is one passage where Mackenna has a better translation

For Plotinus, therefore, there is one time because there is one Soul. This one time is everywhere because the Soul is everywhere in nature as our souls are everywhere in our bodies; and this time is one in all human souls because all souls are one Soul. Plotinus, thus, fairly saves the unity of time, and this, perhaps all but unregenerate pragmatists will concede, is of philosophic importance.

A short postscript relative to the immediately subsequent history may furnish an appropriate conclusion. Neoplatonic history culminates in Proclus. Just prior comes Augustine, who was to dominate Christian thinking for centuries. As it is often said that Christian philosophy in general and Augustine in particular owe much to Neoplatonism, it is of interest to see how Proclus and Augustine viewed the problem of time. Neither of them adopted the exact position of Plotinus. Before Plotinus, Archytas, who stimulated the discussion of time, made time the measure of the universal motion that is the first and immediate and external activity of the Soul. Plotinus and Porphyry located time higher and made it the life of the Soul. From this life comes the motion Archytas had mentioned. Jamblichus places time still higher and makes time the cause that determines the life of the Soul. Proclus goes still further and makes time a god.[27]

Augustine, far from following this direction, brings us back to earth again and locates time in created minds. The problem of measuring the past, which no longer exists, and the future, which does not yet exist, is solved by making past and future both present in the mind. Then too Augustine must justify the doctrine of temporal creation. This preoccupation with revealed religion, and the more ordinary philosophic interest which led Augustine to psychological solutions of the problems of time, both indicate that some accounts of Augustine's dependence on Neoplatonism are a little overdrawn.

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than Bréhier, who seems to have followed Duhem, *Le Système du Monde*, I 248.

[27] *Cf.* Pierre Duhem, *Le Système du Monde*, I 246 ff. On page 257 he writes: "La méthode constante des Neoplatoniciens, en effet, est celle dont Jamblique vient de nous donner un exemple; elle consiste à transformer en êtres réellement distincts et subsistants par eux-mêmes toutes les notions que notre esprit peut discerner les unes des autres."

REFORMED MATERIALISM AND INTRINSIC ENDURANCE

THERE are optional horizons in philosophy. Thus one can ignore ontology or one can commit oneself to the ontological enterprise and grapple, as best one can, with some rather abstract distinctions and their implications. Pragmatism and positivism have, in the main, made the first choice and within that horizon have done, as all acknowledge, admirable analytic work. Realism, on the other hand, has in its various modes accepted an ontological horizon. Even such opposing positions as materialism and neo-Thomism have at least this much in common, that they take ontological categories seriously.

The drift of my own thought has been in the direction of a reformed materialism less dominated by extreme atomism and strict mechanical notions than has usually been the case in materialism. Recognition is given to internal relations, to integration, to immanent causality, to emergence and local wholeness. At the same time, epistemological reflection has convinced me that material systems have far more to them than is grasped by abstract scientific knowledge about their composition and properties. Dualistic traditions have been hurtful here. Likewise injurious has been the Humian denial of causal agency. It is my opinion that we must think more along the lines of a reformed notion of *substantive being* fully capable of doing justice to becoming, events, and process.

Now, as I see the ontological situation, materialism reformed along these lines is confronted by ontologies having a theistic dimension. It is, I take it, the very genius of all forms of materialism to postulate the intrinsic endurance and immanent existence of material systems. Theism, on the other hand, looks upon nature and natural things as pointing beyond themselves for their endurance and existence. Neo-Thomism is very frank about this and conceives *esse*, or existence, as something contributed by God to the vast range of essences or quiddities. And such existence is different in different things, since it is received and not absolute. Non-catholic writers, such as Whitehead and Parker, approach the

question from different assumptions; and yet I sense in them the postulate of dependent, or contributed, existence.

It is my desire in the present paper to connect naturalism with the principle of intrinsic endurance and to explore the meanings to be given to such terms as matter, being, and existence, within such a context. It is my intention to use neo-Thomism largely as a foil and to contrast its hylomorphism and its conception of substance and existence with those of reformed materialism. But I shall raise questions which, I feel sure, all anti-naturalists will want to debate. Not only will I give definitions but I will also indicate cosmological principles dealing with such topics as conservation, intrinsic endurance and becoming, being and nothing, existence and non-existence of denotables, eternity, quantity of being and quality, generation and corruption. In short, I shall permit myself something of an ontological debauch.

Now it goes without saying that a philosophically respectable materialism must have some epistemological and ontological subtlety. Atomic materialism united with classical mechanics had neither. The only intrinsic endurance it could think of was Eleatic. But in these energistic and evolutionary days the Eleatic type of intrinsic endurance is out of the question. Intrinsic endurance must be linked with activity, relations, and conservation. It cannot be a static permanence, or, as Whitehead calls it, simple endurance. All this sums up to my conviction that the postulates essential to a non-reductive materialism have as yet scarcely been explored.

It is relevant to recall that, during the first two decades of this century, the most persistent philosophical problem outside the epistemological field was that of the conquest of Cartesian dualism. How could mind and matter be brought together? And it is worthy of note that the dependence of these terms upon a God as a more primary substance was largely disregarded. Cartesian dualism, so conceived, found its focus in the mind-body problem. Radical empiricism and neutralism represented one line of approach which is, perhaps, still reflected in the positivist's double-language formula. The critical realist was, as naturally, led to explore other possibilities such as a double knowledge of the organism and the replacement of reductive mechanism by more evolutionary and integrative principles.

In those days the general drift in American philosophy—far more, I take it, than in English—was towards some sort of naturalism. And I do not say that is not still the case. But, for various cultural reasons, theism cannot now so easily be left out of the picture. Naturalism is being challenged to state and defend its postulates. Theologically inclined physicists have entered the lists; and, in the realm of technical philosophy, we have such distinguished thinkers as Maritain, Gilson, Whitehead, Montague, Parker, Northrop, and Hartshorne, standing for some form or other of theism.

Now any one who has an ontological horizon cannot brush this challenge off as easily as can the pragmatist or the positivist. An existential question is at stake and so a mere redefinition of God as an ideal does not meet the issue.

It is my conviction that this theistic challenge to naturalism is both desirable and stimulating. It should force the naturalistic physical realist to explore his most basic assumptions. In my own thinking, at least, it has led to a study of the existential theory implied by materialism. Of course, the type of materialism must first pass other tests. It must be of a philosophical kind responsive to the niceties of theory of knowledge. The name is of less consequence. It can be called the new materialism, reformed materialism, qualitative materialism—all expressions which I have used.[1] At this philosophical level inert brickbats are left behind and are replaced by categorial analyses. Existence, stuff, activity, relations, space, time, endurance, becoming, all these must be clarified and integrated. All of which means that materialism must be stepped up philosophically.

As I see it, the materialist holds that the cosmos is material in nature *and exists in its own right.* To assert this is to deny the contingency of the world. Another way of putting it is to affirm the *intrinsic endurance* of physical systems in their very becoming.

Now it is this principle that theism denies whether in terms of creation *ex nihilo,* most characteristic of Christian philosophies, or in terms of emanation or Platonic ingredience. The anti-materialist

[1] It may be of some slight historical interest to note the fact that I proposed the term, the new materialism, in the preface to *Critical Realism* (1916). Santayana became the only living materialist somewhat later.

holds either that there is no material world (the idealistic alternative so dear to liberal Protestantism) or that it has a secondary, or derived, sort of existence. There are, of course, all sorts of philosophical complications and combinations. Thus Montague and Northrop seem to hold that the physical world needs supplementation to account for order and evolution. But I am, at present, chiefly interested in the question of *aseity* as against contingency.

This question is, of course, a hoary one. Looking up *aseity* in the Oxford Dictionary, I found three interesting quotations: "The natural world for any self stability, aseity, or essential immutability of its own may again cease to be"; "By what mysterious light have you discovered that aseity is entail'd on matter?"; "The obscure and abysmal subject of the divine aseity." To the positivist, no doubt, such quotations reflect obscurantism. To the physical realist they do not. It is important to get clear ideas about the meaning of existence and to connect them up with endurance and becoming. I shall, therefore, be engaged in the present article in looking at such categories from a materialist's point of view. A contrasting position is always of value in such matters; and so I shall employ neo-Thomism as a foil, partly because its postulates are so definite and partly because its Aristotelian principles enable me to bring out a contrasting way of handling generation and corruption. For the Thomist there are two modes of existence, the divine and the created; and existence is rather a mysterious *transcendental* along with truth and perfection. I may as well say at once that I shall argue against these transcendentals and change existence into the factual recognition of *existency*, so that to be a denotable entails existence. While I shall not discuss truth as a transcendental, it is obvious that, for the materialist, it cannot be a harmony between essence and the eternal thought of God, while perfection dissolves into properties and triadically founded valuations. All of which indicates that neo-Thomism helps to bring the categories of materialism into relief. Now, while I shall employ Christian Aristotelianism as a contrast, I shall also have in mind Whitehead's union of theism and reformed subjectivism. There are other distinguished thinkers, such as Hartshorne and Parker, who are also anti-materialistic and, I think, ultimately regard selves and things as having a derived status. I have the personal word of Whitehead that his position is opposed to naturalism.

Metaphysics has been so much associated with the postulation of a higher reality beyond nature, with a meta-physics, that I have preferred the more neutral term ontology. I note that Marxists have the same preference, as also does Santayana. Materialism, then, is an ontology isomorphic with modern science. Much could be said for the post-Aristotelian division of philosophy into physics, logic, and ethics. But the science of physics, as it increasingly expressed metric knowledge about nature and retreated from natural philosophy (wisely, I think), came to engross the first term of this trinity. But must not the science of physics give us knowledge about physical existence? Materialism holds this belief and is an ontology.

After considerable reflection I have chosen the expression, intrinsic endurance, in place of simple endurance. While intrinsic endurance rejects dependent, derived, or contributed, endurance, it does not entail passivity, Eleatic fixity, or brickbatness. Matter I take to be active, dynamic, relational and selforganizing. It is an endurance which goes with activity for which I am contending. All composite existents which emerge are generated and corrupted, are maintained by activity. My divergence from *eventism* has other roots than a desire to defend outgrown notions of substance. Rather is it the expression of realism, as against sensationalism, and reflects the recognition of structure, ontological causality, *and the generation of composite wholes.* Eventism does not seem to me to do justice to unavoidable categories. Thus those who build upon sensations and feeling, as Russell and Whitehead do, cannot accept substantiveness and force. There is a perpetual perishing of consciousness which, as I pointed out long ago in an article, is not conserved. What, then, can possess intrinsic endurance? Is it creativity? God? the permanent possibility of sensibilia? or material being? *Or can we get along without intrinsic endurance?*

One final preliminary point must be briefly discussed since Maritain has adopted the term "critical realism". Such an implied identification has more validity for the essence-wing of critical realism than it has for my own way of analysing knowledge-claims. As I understand it, knowledge, for the Thomist, involves an apprehension of essences, or forms, which, at the level of nature, are embodied and correlative to matter defined as potency.

Its *hylomorphism* requires such a formulation, which is Aristotelian. But the problem I set myself was that of Reid. The setting was empirical and conceptualistic. I worked it out on the epistemic side in terms of denotative reference and conceptual disclosure. The reference is transsensory and denotative. On the ontological side, *material being* is regarded as intrinsically structured and dynamic. In reformed materialism matter is not a principle of individuation or a kind of correlative potency. It is always a particular, a denotable. While we never intuit such denotables we can comprehend both categorial and detailed facts about them. I have the impression that Maritain does not take the microscopic denotables of science as literally as I do. They are more *entia rationis*.

In all this, I take it, the new, qualitative materialism lies midway between neo-Thomism and Whiteheadism. As against the first it emphasizes a materialistic form of hylomorphism in which matter absorbs both pattern and activity. As against the second, it unites activity with intrinsic endurance and assigns both to matter. It is obviously easier to contrast the new materialism with neo-Thomism since both are, roughly speaking, substantialistic. Materialism denies the sort of contingency which rejects the aseity of matter, profoundly modifies Thomistic hylomorphism in the direction indicated above, and substitutes functional directionism for formal finalism. In doing so, it, of course, equally breaks with classical mechanism and emphasizes intrinsic order and growth. I need not here contrast the new materialism with Whitehead's magnificent speculation since I have already done so in my contribution to the Whitehead volume.[2]

I

Four primary principles of the new materialism may be stated as follows: (1) stuff or material, (2) dynamic connections and organization, (3) intrinsic endurance, and (4) levels of integrative and efficient causality. These principles qualify one another.

Stuff, or material, is a category of a fairly complex sort. It reflects the common notion of thinghood in terms of recoverable

[2] I was asked by the editor to make the comparison. After all, it was not *lèse-majesté* since I had been publishing articles since 1906, Is a sahib mentality still abroad?

constituents. There is danger here since pattern and organization tend to be neglected as they were in traditional mechanical notions. I shall have something to say about this point in the later discussion of quality. Nor is this all. The concept of stuff has a relational moment. Here it ranges from the artist's idea of a medium upon which to work to the scientist's more analytic perspective. The term is realistic, denotative, manipulative, analytic, and synthetic. It does not imply that we need know very much about the intrinsic nature of materials. To the philosopher the concept of stuff, or material, is a challenge to categorial analysis. Plasticity, activity, form-making, recoverableness, intrinsic endurance, all stand out for comprehension.

And this brings us to the consideration of connections and organization. I note that Pepper and many others assume that materialism involves mechanicalism. That, surely, is a prejudice. Why should materialism lag behind science? Classical materialism thought in terms of classical physics, that is, in terms of Eleatic particles having *simple endurance* of the static variety. But there is nothing about materialism as an ontology which limits it to such outworn postulates. From the very beginning of my thinking I rejected Newtonian absolute space and time and made both space and time, ontologically speaking, adjectival and relational. And I have always argued that s and t as metric quantities presuppose space and time as ontological characteristics of matter. Particles must be conceived in terms of connections, causal activities, fields. And this signifies that ontological time is to be correlated with *change of constitution* but not with a perpetual perishing of matter. I shall, in fact, argue that activity and intrinsic endurance are not contradictory.

From its inception in Greek thought materialism emphasized the positive and independent nature of matter. It did not depend upon the Gods nor was it under the control of purposes or ends external to itself. Instead, it endured in its own right, was selfsufficient and selfconserved. And it was the possession of these characteristics that made it from the first *the logical correlate of naturalism*. Let us admit at once that intrinsic endurance was conceived too simply and statically in traditional materialism, as it was later in classical physics. Changes were thought of as not involving the atoms them-

selves and reducible to mere shifts of position. This compromise with Eleaticism satisfied the demands of elementary physics and a philosophy hardly awake to the requirements of biology and psychology.

But I would still hold it true that the genius of materialism, as of naturalism, requires an intrinsic endurance, or selfconservation, on the part of material being. Such endurance must be underived and ultimate. And this, I take it, is a flat rejection of the contingency of nature. We shall have more to say about this as we come to distinguish between the existence of any denotable and the intrinsic endurance of material being. A denotable always involves a particular pattern and constitution and so is bound up with the variable, or temporal, dimension of nature.

II

Let it be noted, then, that the overhauling of materialism must needs be a drastic one to make it compatible with evolutionary naturalism. There is no excuse for tying it down to past reductive and mechanical postulates. Simple location must not mean the denial of dynamic connections. At the most it means something of the nature of the law of inverse squares. Even the general relativity-theory admits determinable warpings expressive of the localization of matter. In reading Eddington on *The Philosophy of Physical Science* I find that the only kind of realism he is acquainted with is the Joadian type and I have considerable sympathy with his criticism of it. To make sensations distinct from sensings and thoughts independent of thinking does not appeal to the critical realist. Yet Eddington's conception of mind seems to me unempirical. But I have not the space to consider in detail his epistemology. Jeans, on the other hand, has developed a Kantian kind of agnosticism combined with an ontological Platonism. In any case both have developed a recognition of the difference between the form of scientific knowledge-about and *being*. To the philosopher this points to the need of the clarification of categories. Being, stuff, space, time, causality, as ontological, must be distinguished from their cognitive translation.[3] To use Professor Hall's term,

[3] For this distinction see my article, "Causality and Substance", this *Review*, Jan. 1943.

categories are *constants;* and we should not expect ontological statements to be verifiable in quite the fashion of predictive, scientific theories.[4]

It is important to bear in mind that traditional materialism not only had no adequate epistemology back of it but was identified with dualistic assumptions which left material being a washed-out abstraction, such as mere extension, with no positive, intrinsic content. I am led to think of this tradition when I am told that mine is an agnostic kind of materialism. Rather is it a protest against these dualistic caricatures.[5] As I see it, science does not reduce material being to a mere quantity but merely deciphers the metric quantities obtainable by its technique. It is such *knowledge about* material systems. It is the very import of ontology to deny that being can be reduced to knowledge. Surely it has been one of the weaknesses of idealism to flirt with such a reduction. Materialism and Aristotelian philosophies have been far healthier in this respect. Matter as *being* must have a positive and determinate content. Its actuality cannot be vacuous. But the materialist takes it to be wise not to jump too hastily to the panpsychistic universalization of feeling as a kind of sample. Have we not expected too much from external knowledge resting on sensory disclosures aided by metrical techniques? Ontology puts scientific knowledge in better perspective. Science does an excellent job. Why should we expect it to make nature transparent? Idealism, sensationalism, and positivism have, as I see it, nourished absurd pretensions which materialism must protest against. Knowledge merely makes certain quantitative, structural, and behavioral facts about nature stand out. So far it is a *disclosure;* but reflection on ontology and its categories should swing us over to the implications of causal agency. Post-Humian philosophy has, in my opinion, been vitiated by the *overstress on prediction.* Predictions and *if-thens* have made philosophers too temporalistic, neglectful of constants and constitution.

[4] I refer to Hall's contribution to the book, *Twentieth Century Philosophy.* I hope the positivists will reply to his critique of their position. Also see Miss Stebbing's criticism of Joad's astonishingly naïve epistemology in the recent *Aristotelian Society* symposium. He is almost as artless as most positivists for whom epistemology is *sinnlos.*

[5] Garnett follows Stout in this tradition and so establishes an immaterial self and God. Not being able to read everything, he limited himself to British theories of emergence. Colonially minded Americans do the same.

Though we cannot *intuit* material existence in external observation, it at least is clear to the ontologist that it must have the sort of being upon which the categories are grounded. The term stuff, as I see it, lends itself to this demand. It is but another word for *being* taken relationally. It indicates denotables which can be combined and separated, which can be operated upon, which have a career of their own. *In principle,* I take it, matter consists of denotables which are observable; only, observation by means of sensations must not be confused with observing sensations, a confusion positivism is guilty of.

Let us grant, again, that materialism has, on the whole, been dominated by its approach in terms of the inorganic sciences. What I have called external, or non-participative, knowledge called the tune. Now the evolutionary materialist recognizes that the organic self is a material system which has the peculiar property of having knowledge directed at itself. This fact is unique for human beings and must have basic significance for reformed materialism. Here we have what I would call *participative knowledge.* Here, and here alone, are the data of knowledge intrinsically integral to functional activities of the brain-mind. What they disclose is a sustained series of processes resting on habits and capacities. In them we have some slight glimpse into organizational complexities, a glimpse which fits in with external knowledge of the brain.

Now, as I see it, the shifting field of private consciousness must be regarded as a "natural isolate" of the functioning brain. As such, it demonstrates that a unified physical system has a qualitative dimension of this sort coterminous with activities. And, surely, that is what we might expect, once we freed ourselves from the negative notions associated with purely external knowledge. Brickbat notions of matter, when united with the Eleatic and Cartesian traditions mentioned above, fostered a reluctance to conceive physical systems as having a qualitative, ontological dimension or insideness. And, as I have argued, phenomenalistic empiricism worked in the same direction by its rejection of ontology. But the critical materialist is forced to postulate a positive content to being, a content responsive to the relations and activities discernible even to external knowledge.

Participative knowing, not realistically enough interpreted, has been, of course, the *raison d'être* of idealism and panpsychism. But because they never did justice to external, or nonparticipative, knowing, they were easily misled even here. It was the question of the epistemology and ontology of the "self" which offered difficulties. Berkeley proclaims only a vague notion of the self. But the self is not the notion. And Kant is agnostic with respect to the noumenal self. How much simpler and franker is the proposal of the materialist that the self is the organism! Here, however, we have a twofold knowledge, the one participative, the other external, or nonparticipative. It is historically interesting to note that, as C. A. Strong and Durant Drake moved from Kantian agnosticism to critical realism, they at the same time became materialists, only materialists of a still mechanistic type who did not see the importance of organization and functional unity. One reason for Drake's theory of essences, which have no existence, was his belief that the brain is merely an aggregate of moving particles and that its functional unity is merely a sort of statistical resultant. It was upon this ground that he rejected my form of the double-knowledge approach to the brain and left to the brain only the vague intrinsic sentiency of material particles. In a conversation I had with Strong at Fiesoli in '37 he admitted that he had not done justice in his thought to organization and a *functional togetherness*. I do not hesitate to say that the dividing line between the old and the new materialism lies here. The wise handling of relational and functional togetherness which avoids the atomism of completely external relations, on the one hand, and the mystical rendition of the phrase that the whole is more than the sum of its parts, on the other, is the desideratum. As I see it, Whitehead's Platonic concretion of events is one alternative to an activistic and pattern-forming materialism. I am also inclined to think that the brain is a very specialized organ for the formation of action-patterns and that what holds of it does not apply to liver or stomach.

While, then, experiencing in the concrete is, I believe, intrinsic to the functioning brain, there is no *intuition* of the ontological context of such experiencing.

Now two conclusions seem to me to follow from these prin-

ciples: we have (1) no intuition of matter, and (2) no acquaintance with an intrinsic endurant.[6] All of which means that a sample of intrinsic endurance cannot be found in consciousness. And that is precisely what we should deductively expect, since consciousness is correlated with functional activity and expresses what I call the qualitative dimension of material systems. *Activity is to me unthinkable without a variable in that which is active.* The antithesis is Eleaticism, inertness. Active intrinsic endurance entails duration, time. But duration applies to existents and their acts. Consciousness is inseparable from cerebral action-patterns. Thoughts are participial events while the organic self is a continuant existent.

It follows that the *mode of being* of consciousness is *participial* rather than substantive. The principle of conservation, or intrinsic endurance, does not apply to it.

The empirical base of the apprehension of the meaning, continuance, is a tantalizing psychological question. And yet the meaning stands out in both external perception and selfawareness and, as I think, by mutual support. That is, I doubt that if we could not develop the apprehension of our numerical selfidentity we could develop the meaning of thinghood. At both poles, as I see it, we have the constant working of interpretative, cognitive activity. As regards the self, continuance and numerical sameness stand out cognitively through continuing felt attitudes and rememberings until we rightly comprehend ourselves as agents. Such experiences, heightened by social relations, operate as natural symbols of the self much as sensations are employed as natural symbols of external things. It is participative knowing since feelings and thoughts are in their mode of being participial to the organic self. By such participation we approach an intuition of the attitudes and activities of the self, for I see no reason to deny that these natural symbols have a disclosure-value with respect to the tides of our being. Certainly, the situation is even more intimate than in the use of sensations in perception as natural symbols having disclosure-value for external things. We must, however, be very careful in our use of the term intuition. I am inclined to think that cognition of the self is mediated, that is, symbolic and referential.

If, then, consciousness has only participial being and does not

[6] Hume's discussion of personal identity is illuminating. Memory does not produce the identity but discloses it. But he cannot explain it on his assumptions.

furnish us with a sample of intrinsic endurance, we must turn to the realm of denotables, that is, to self and things. To these, as we are aware, some measure of continuance is assigned, even though composite denotables are generated and corrupted and, consequently, are commonly characterized as having contingent, or historical, *existence*.

But we must be very careful to distinguish between being and existence. It seems to me clear that all physical denotables are forms of being. To deny this would be to consider them phenomenal or of the nature of illusions. They would be like bubbles which could burst and not leave a wrack behind. As I see it, reformed materialism is here confronted with the perennial question of process or becoming. There must be nothing illusory or transcending being about process and becoming. Matter must by its very nature be active and relational; and, to me, the two expressions imply one another. In short, I shall argue for the aseity of matter and maintain its intrinsic endurance.

And here we come upon basic questions which science alone can in the long run answer. Is the *floor* of physical being particulate even though the particles are never in isolation? Eddington holds strongly that there is a determinate number of both electrons and protons. In some fashion these are integrated to form the nucleus of atoms. They are in the nucleus as the eggs are in the omelette. Some kind of a dynamic organization has taken place which must not be pictorialized in billiard-ball terms. At any rate we must, I take it, postulate primary endurants which form what I called secondary endurants.[7] Thereafter, generation and corruption are on a more macroscopic scale; and we enter the realm of the countable and the describable. It is at this level that the term existence most properly comes into play. Such complex denotables are generated and corrupted so that existence is epistemically balanced by nonexistence. If such a denotable is an existent, in a very real sense *it* can cease to exist. Such is the very nature of history, becoming, and process. It is clear that we must so conceive existence that it permits the significance of nonexistence or ceasing to exist. But *being* must be made of sterner stuff. It is conserved and, as we shall argue, never conceivably becomes nothing. Change of existence is, rather, within being, an affair of constitution and

[7] See *The Philosophy of Physical Realism*, ch. xii.

process. In this sense there is no conservation of existence even though there is conservation of being. But we shall have more to say about these distinctions when we come to discuss quality and the kind of substantiality which goes with composite individuality. We humans have only this kind of temporary and contingent existence within the domain of physical being.

III

The ontological alternatives are fairly definite. By its very logic materialism must harmonize the intrinsic endurance of its ultimate stuff with the generation and corruption of composite wholes; and the facts indicate that integrative causality gives rise to the emergence of *novel levels of existence within being.* If wholeness applies, then mechanistic atomism must be rejected with its reductionism and its denial of causal agency to composite existents like human beings. On the other hand, theism moves from the contingency of existents to the contingency of matter, from a contributed kind of existence to an existence of a higher order. In this setting creation is supposed to become logically thinkable if not realizable.

There are many subtle variations of the theistic hypothesis. A brilliant recent development of emanation is Parker's Omega System which makes what I call the floor of being higher in quality than the monads which are sustained by it.

The hylomorphism of materialism, as we have noted, makes the unity and organized wholeness of an existent the expression of integrative causality so that the higher arises from the lower. Such a thesis is contrary to the genius of Christian Aristotelianism just as it was contrary to the unevolutionary outlook of Aristotle. While a composite may have a unity and form, it is, I understand, held that this form must be given an existence commensurate with the potencies of the forms of the parts. The demand is logical and would correspond to the thesis of the evolutionist that the whole is not indifferent to its parts. But where the Thomist says form or quiddity, the materialist says organized wholeness. It is in this fashion that integrative causality makes room for immanent causality.

Lexicographers inform us that the verb "to exist" had a surpris-

ingly late appearance in English and that the primary meaning was "to stand out, to be perceptible". Then came "having being in a specified place, to continue in being, to maintain in existence". Such existence has an epistemic and an ontological pole. The gist of the latter is an acknowledgment of a denotable, that is, of something which can be referred to by pointing and description. Being is not blank and undifferentiated but ordered and cut up into denotables. We do not intuit these denotables but select them through natural symbols and descriptions. But what we are seeking is supposed to have the same sort of reality we have. I take it that appreciation of the brute fact of existence is grounded in self-awareness, in doing and suffering. Those who drop this meaning from perception are unrealistic. Denotables are then reducible to "If-then" predictions. There is no appreciation of expendable energies.

Logicians who have been interested in so-called existential propositions have, very naturally, concerned themselves with the epistemic pole and the applicability of concepts. Russell has never been afraid of paradoxes and so defined existence as a property of concepts. Obviously, it cannot be a property of all concepts but only of those which are exemplified. Hence it must be a relational property. The final test comes in perceptual verification. Is there a denotable describable by the concept? It seems to me clear that it is the denotable which we acknowledge to be an existent, to be out there; and yet the epistemic and relational element in the acknowledgment must not be forgotten. Were we able simply to intuit denotables there would not be this complication. And, as we have noted, the nearest approach to this is in selfawareness.

The Russellian view has something in common with the scholastic tradition with respect to essences or forms. Existence was conceived as a plus except with respect to that essence which necessarily existed or entailed its own existence. It is obvious that the realistic empiricism is skeptical of finding any concept which implies its own exemplification. But even St. Thomas rejected the ontological proof. It is the contingency of the existence of denotables which is emphasized. But what if denotables are but organizations *within being* whose contingency is that of their composite wholeness and unity? Then being is something ultimate

which contingent denotables themselves are regarded as being expressions of. Now, as I see it, that has always been the theory of materialism and finds formulation in the concept of recoverable stuff and intrinsic endurance. Contingency and variability are then assigned to relations, organization, to the process side of being. On the other hand, the more theistic and creationalistic theory denies this notion of being.

One of the reasons why the secular realist is accustomed to emphasize the categories of existence and being is his long controversy with idealism and positivism. Idealistic systems, as A. K. Rogers never tired of pointing out, neglected the question of existence and tried to remain within the context of merely logical coherence. The realist, in opposition, asserted that thought, from perception to judgment, always referred to something beyond itself. I have argued that the pragmatist in his rejection of the correspondence-theory of truth[8] still remained with the idealist, though ambiguously and equivocally. But the naturalistic realist is thereupon confronted with the choice between materialism and theism with various forms of panpsychism hovering between.

But must we not have a *sample of being* if the concept is to have empirical meaning? Now I have argued that we have only a sample of participial being as in sensations and feelings; and yet that both external and participative knowing operate in terms of meanings and references involving such categories as endurance, activity, capacity, constitution. All of which signifies that cognition is not the same as sensing and rests upon interpretation and intellection. I once remarked to Russell that perceiving should be distinguished from sensing; but he refused to consider the distinction, and that was that.[9] But without such a distinction eventism follows logically. The whole concept of substantive being arises in cognition. As I see it, then, we should not expect an intuition of substantive being either in selfawareness or in external perception. And, as a matter of fact, consciousness is to be correlated with becoming and functioning, with patterns and shifts of relations.

[8] I have reconstructed this traditional theory into a correspondence-theory of the *conditions* of knowledge and truth. I define *true* as a case of knowledge or as expressing a fact. Criteria are empirical and logical. Correspondence is a justified inference.

[9] In my opinion perception has a marked symbolic side. That is why it can be expressed in public terms and has its semantic content.

IV

We are brought, then, to the question of the proper conception of the relation between being and intrinsic endurance or conservation in activity.

It is fairly evident that composite denotables, such as chemical substances and organisms, are contingent existents, entities which come and go in the tides of being. What I have called qualitative substances, the highest emergent level of which, so far as we know, are human beings, are of this sort. They are generated, live their span, and vanish. They are continuants and have duration. Selfawareness ceases at death but the bodies remain for others to study and science informs us that the stuff of which they are composed is conserved. The kind of self Hume looked for, and could not find, has no existence. There is no inert, and changeless, soul-substance. And so we have consciousness, as a natural isolate and a case of experienced participial being, the organic self as a denotable, known externally and participatively and adjudged a continuant, or contingent substance, sustained by processes. Is this all? The materialist says there is more. There must be a stuff, active and relational but selfconserving and having intrinsic endurance.

I take it that fact and reflection push the human mind on to the postulation of intrinsic endurance and the eternal. And the reasoning is not difficult to uncover. For instance, generation and corruption are seen to be supplementary. Already in Heraclitus this note is struck. Empedocles has his recurrent cycles driven by love and hate while the later atomism of Epicurus has much the same *dramatis personae*. Naturalism, in short, has been unable to conceive absolute beginnings and endings. And it should be recognized that orthodox theism has its own eternity of intrinsic endurance. It is to creation that there is assigned a secondary kind of being and endurance.

Now, as I see it, the generation of being from nonbeing is unthinkable for the simple reason that it is meaningless. The nonexistence of a continuant or contingent substance is thinkable since it merely signifies that no denotable is correctly symbolized by A since it has ceased to exist. But being is that which is presupposed by all denotables, for it is that within which they arise and cease

to be. That A exists and that A does not exist are contradictories. But *being* cannot in the same logical fashion be set over against *not-being*. So far as I can see, not-being is only a verbalism. Such seems to me the philosophy of the aseity of matter. Out of nothing arises nothing because the term can have no application.

I judge that it was thoughts such as these that led the Greeks to postulate the eternity of the universe and its selfmaintenance through change. Aristotle but agreed with the Ionians; and the materialists only emphasized the same postulate. Christian thought merely transferred it to a supernatural realm, while emanation doctrines sought a *via media*.

And so we come to the alternatives: either the intrinsic endurance of materialistic naturalism or the contributed endurance of supernaturalism in all its sophisticated forms. It seems to me evident that physical realism implies the first alternative. Existence signifies an acknowledgment of specified being; and, while we cannot intuit the intrinsic endurance of matter, we equally cannot intuit its dependent endurance. The burden of proof rests, therefore, upon anyone who postulates another kind of being to be granted intrinsic endurance.

Reformed materialism reverses Aristotelianism or, to use Marxian phraseology, stands it on its head. There must be a lowest limit of material texture and an open series of integrative emergence. It is, of course, the task of science to determine the most elementary level of stuff. But, since I do not believe in a linear evolution for the universe, as Lloyd Morgan and Alexander apparently did, I would hold that all levels of material organization are, or can be, contemporaneous. About this I shall have more to say in the next section. It may well be that the universe has always been much as it is at present, that is, has always had a variegated and spatially dispersed cosmography; and this without an eternal recurrence or great year. This would mean that ontological time has no direction since it is always local and is but a name for what is involved in all activity. We must avoid reading the distinctions of our temporal knowledge with its linear implications into nature. Real time is only an actual activity; and activity is local, relational, and spatial.

As I follow the argument of Gilson, it rests upon two bases:

(1) the rejection of emergence, and (2) the unempirical, or metaphysical, postulation of an act of existing. And these are closely connected in this form of natural theology.[10]

It is, apparently, Gilson's thesis that philosophers have shut themselves up into essences and have, therefore, never got to existence. A hit, if you will, at Plato, Spinoza, and Santayana. But not a hit at Berkeley or Hume or at the outlook of the more empirical form of critical realism. In ourselves we have participative cognition and, in sensation and feeling, *being* is given participially and denoted both practically and theoretically *through* what is given. Thus being is factual and is both given and acknowledged.

But the materialist, while he does not believe in the metaphysical, recognizes and acknowledges what the pragmatist or the positivist is wont to call the *transexperiential*, but *not*, of course, the undenotable and the unknowable. External being cannot be intuited and internal being can be intuited only participially. The intriguing consequence is that what the neo-Thomist calls *esse* and assigns to God is by the materialist assigned to dynamic and pattern-forming matter. While the former asserts the contingency of the material world and postulates two modes of being, the materialist denies the contingency of the material world and finds no evidence for two modes of being. And with the denial of the contingency of the material world goes the affirmation of its intrinsic endurance.

It would lead us too far to consider Gilson's handling of the principle of emergence. I quite agree with him that it is an ontological principle as well as a scientific one. But he makes it too easy for his argument by assuming that order and organization are not intrinsic to even inorganic systems and that out of simpler forms of order more complex forms cannot emerge through integrative causality. I fear that his scientists are too tempting because of their careless use of categories like chance and mechanism. It is a good dialectical display but hardly convincing to the naturalistic philosopher. And, of course, we are brought here to the sharp opposition between finalistic hylomorphism and evolutionary materialism to whose matter activity, relations, and intrinsic order are not alien. A materialism which finds a place for organization re-

[10] I refer, of course, to his argument in *God and Philosophy*.

verses Aristotelianism, for it moves in an exploratory way from the lower to the higher and not in a finalistic and hierarchical fashion from the higher to the lower.[11]

V

And so we find ourselves overlooking the perennial problems of becoming with intrinsic endurance, of quantity with quality, of eternity with time. How are composite, individual substances generated, maintained, and corrupted within an ocean of intrinsic endurance? How can there be qualitative gain and loss along with conservation of the amount of stuff or being? How can eternity include time? The logic of reformed materialism points to answers. In this concluding section I can only make suggestions.

As I see it, generation applies to the composite and integrated and presupposes the intrinsic endurance of the stuff which is integrated. Were any part of this to lose its intrinsic endurance that would mean that being had collapsed into not-being, which is unthinkable, meaningless.[12] Generation and becoming, therefore, belong to another ontological dimension than intrinsic endurance. To assert that A is generated and continues to exist for a while and then is corrupted is a statement about the tides of organization within being with its intrinsic endurance. In neither generation nor corruption does one move outside the context of being. All of which means that activity and organization reside in the very substance of being. Here we turn our back on any Eleatic motif in the most drastic manner. Matter implies process and process implies matter. It is a materialistic *devenir*, not, as with Bergson, a vitalistic and mystical one.

Generable qualities and capacities accompany becoming[13] and it is for this reason that the conservation of the amount of being does not conflict with qualitative gain and loss. We humans are born, live some three score and ten, and then vanish from existence. Is there not quality to our lives, often unique quality? Values are

[11] *Cf.* my article, "Causality and Substance", this *Review*, Jan. 1943.

[12] Perhaps this is too strong. See Parker's comment. I mean that being, unlike an existent, has no contrast term. At most, it would signify the snuffing out of reality by itself, an internal collapse into nothingness. I can see no *why* to this. But the theists assume it; why can't the poor materialist do the same?

[13] These must rest upon *primordial* qualities and capacities.

realized; and *lost* because no longer sustained by the persons and groups who found them desirable. Such is the more or less tragic texture of human life.

Now I take it that the whole concept of quality in ontology has been mishandled because stupidly put in the context of projected sensuous qualities, for the naïve realist plastered on the surface of denoted things. Critical realism has turned its back upon such pictorial and external conceptions of quality. No; quality must be internal and intrinsic to being itself and a variable congenital with organization, changing capacities, and abilities. Quality is the changing content of being as causal integration proceeds and recedes. But, alas! our own intuition of it is limited to that "natural isolate", the private stream of our experiencing. But how could it be otherwise? It is important to note the presence of meanings based on operations of denotation and comparison. Consciousness reflects intellection as well as sensing. Empiricism has not always done justice to intellection.

I may remark incidentally that I do not see that, as the Marxists maintain following a clue in Hegel, quantity changes into quality. It is true, however, that the allocation of quantity does affect quality in that it affects wholes and relations. But I intend to examine this question more thoroughly in a paper on dialectical materialism.[14]

It would follow from this ontological analysis that quality, like generation and corruption, is an existential variable in no wise in conflict with the intrinsic endurance of material being. When philosophers, following Leibniz, speak of possible worlds, it seems to me that they should refer to existence rather than to being. Being is the context of existence. As I see it, being is beyond fact, for it is the source and foundation of fact. We discover being in its processes and manifestations, of which consciousness is the unique case of qualitative participation.

And here I shall allow myself some cosmological speculations which seem to me reasonable but have no connection with any high *a priori* road. The outlook is existential and pluralistic. Thus it is my feeling that cyclical and linear cosmologies are essentially

[14] This paper will appear in the July issue of *Philosophy and Phenomenological Research.*

monistic. By linear cosmologies I mean those that picture the cosmos as moving abreast down a supposed stream of time. Creationalistic analogies are, I think, apt to be operative in such cosmologies. There is a beginning and an end, a cosmic direction and a path; even God has an antecedent and a consequent nature. But, for reformed materialism, ontological time is but the fact of activity and existential process. It is local and covers both emergence and recession. It is tightly tied up with space. Chronology with its past, present, and future stretched out easily leads to ontological illusions. Only, as Eddington saw, if the second law of thermodynamics has cosmic validity is there an ontological arrow intrinsic to being.[15] The process, or existential, capacities of being would thereby be limited. Needless to say, I am skeptical. It seems to me that cyclical notions are really monistic and assume some kind of unified and recurrent cosmic pattern, after the analogy of the great year of the ancients. But pluralism—and I take it that relativity is causally pluralistic—must seek another pattern.

Being a believer in the eternity of the universe and skeptical of linear and cyclical notions, I am naturally led to suppose that the universe has always been much as it is now, a variegated existential domain with a floor, much the same everywhere, above which rise here and there mountain peaks of emergent becoming followed in time by recession. The picture is that of a qualitative rising and subsiding in quite plural and local ways with a cosmic floor woven of particles in their dynamic relations. Biological existents and qualities occur but rarely; and it may well be that mental abilities and symbolic processes are seldom generated. To the traditional religionist this is not a congenial picture and he would like a celestial ceiling or another story. But the naturalistic humanist is ready to accept an austere ontology, austere even though this earth harbors no secret hostility to man. The human drama is local but not without its engrossing qualities of life and death. Cosmic epics must be left to the theist and to all those who, denying the intrinsic endurance of nature, speculate on a metaphysics.

It seems to me logical to hold that the stuff of being neither in-

[15] Entropy seems to be statistical and macroscopic and not to apply to the Alpha or "floor" level.

creases nor decreases. The first possibility suggests minimum beginnings and maximum endings; it is a linear way of approach. The second would be just the reverse of the first. And would not both be based on naïve biological analogies? If the stuff of being is intrinsically active and relational I should expect all generation and corruption to be an affair of integration and disintegration, neither violating the principle of conservation which expresses the intrinsic endurance of being. It is in this fashion that eternity includes existential time or process.

How far the fountain of qualitative, existential life will rise on this planet we do not know. The imagination still has free range. Even Hitler refused to prophesy beyond a thousand years. There is relative, cumulative directionism guided by structure but no finalism. It is only in the behavior of individuals—and not in their genesis—that ends-in-view are set up, evaluated, and chosen. I have not the Platonic daring of Whitehead which assigns affective lure to eternal objects. Here, I suppose, is where the materialist has more of an agnostic streak than the panpsychist. What guides integrative causality at levels below the cortex? We have as yet little but words. Least action, equilibrium, dynamic tension? The genius of Whitehead shows in his philosophical daring, which, however, never exceeds the bounds natural to an English gentleman.

VI

I offer, in conclusion, some summarizing theses:

1. Ontology expresses an horizon entailed by realism.

2. Materialism postulates the intrinsic endurance of material being and is the logical correlate of naturalism.

3. Intrinsic endurance is not Eleatic and is opposed to creation, emanation, and all forms of contributed endurance.

4. The opposite of materialism is meta-physics in its various forms.

5. Reformed materialism rejects the caricatures of reductive materialism associated with Cartesian dualism and classical physics.

6. External, or nonparticipative, knowledge must be supplemented by the fact of the participative knowledge we have of our own organic selves.

7. The intrinsic endurance, or selfconserving, characteristic of

being suggests the eternity of the material universe.

8. Linear cosmologies should be replaced by the postulate of a floor from which emergent levels arise quite locally and exceptionally.

9. Existence is best kept as a term for the factual recognition of describable denotables.

10. There may be a denotable corresponding to the symbol A; and there may not be. "A exists" and "A does not exist" are contradictories which bring out the epistemic side of existence.

11. Existents are qualitative and their existence precarious and historical.

12. In contrast to existence, being is a purely ontological term. It is describable only in terms of categorial distinctions.

13. The nonexistence of A has meaning and so has the Leibnizian principle of existential possibility, but I doubt that not-being or nothing is significant. At the most it would signify the denial of intrinsic endurance.

14. Aristotelian hylomorphism must be stood on its head, as the Marxists say of Hegel, by so changing the conception of matter that it includes form and activity. Directionism and emergence would then take the place of finalism and its theistic ceiling.

15. By distinguishing between being and existence and by giving up essences, except as descriptions, existence ceases to be something mysterious added to essences or quiddities.

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DISCUSSION

SOME COMMENTS ON "REFORMED MATERIALISM AND INTRINSIC ENDURANCE"

NO AMERICAN has done more persistent and original thinking on fundamental philosophical problems during the last thirty years or so than my colleague, Professor Sellars, and to his writings, and equally to conversations with him renewed over as long a period, I owe more than I can say towards the sharpening of my own beliefs. That, nevertheless, we have been unable to come to agreement on matters of the last importance, is perhaps not entirely without significance for the nature and method of philosophical investigation. In order, therefore, to clarify the issues between us, I am venturing to take up the implied challenge to those who look to a different horizon than his own contained in his article, "Reformed Materialism and Intrinsic Endurance". Since the article is too rich in thoughts for a detailed critical review, I shall center my reflections upon four conceptions which appear to be essential for his argument: matter, intrinsic endurance, necessary and contingent being, and local as against universal time and evolution.

First, then, the notion of matter. Although I am now grown grey in philosophical thinking and reading, I am still looking for some positive, distinctive content to the notion as used by materialists or dualists. There are, of course, plenty of negative connotations, but a purely negative concept is philosophically worthless, if indeed it be a concept at all. I continue to be puzzled, moreover, as to why philosophers go on using the concept after Berkeley's devastating analysis and refutation, certain innocuous technical slips in his expression and reasoning being freely admitted. Or when I do seem to be getting a little content, it turns out to be no different from what Berkeley called 'idea' or 'spirit', nothing therefore unique. And despite Professor Sellars' reformation of the notion of matter, I find myself of the same mind—indeed, more so than ever.

I can explain this most easily, I believe, by engaging in some semi-Berkeleian reflections, centering around some presumably material object such as this pencil, guided in my train of thought by what Sellars himself says about matter. Matter, Sellars says, is a denotable. So far then as that qualification is concerned, the pencil is material; but a spirit or self, say Stalin, is also a denotable; hence to be a denotable does not confer any distinction upon matter as compared with spirit. The pencil is, or has, or, if you prefer, is perceived through, a certain colored shape; but that is what Berkeley called an 'idea', and I should prefer to call a 'phantasm' (to use another

Greek term), which as Sellars would agree is not material, but psychic. Then the pencil is surely manipulative, and to be manipulative is, according to Sellars, one of the meanings of stuff or matter; but now, what is manipulative *known as?* This I can discover only by manipulating, and when I manipulate my pencil, what have I? Certain interesting changes of the phantasm, certain new phantasms appearing in my visual field (curious little black shapes called 'words'), certain kinaesthetic and tactual phantasms developing in close association with another visual phantasm (my 'hand'); and other phantasms, too, might develop if, for example, I were to examine the pen with a microscope. The fact that these changes can occur is a 'capacity', and that they can be induced is a 'plasticity'; I would therefore agree with Professor Sellars that plasticity and capacity are attributes of anything denominated 'material'. However, that they are distinctive of matter, I would not agree, for any spirit is also plastic, if it can be educated, and has capacities, say memory. So far, then, there is no uniqueness. Well, what of causal activity and change, which, Sellars tells us, "must be introduced into the very intrinsic nature of matter"? Change, to be sure, is there, as we have noted: the obvious changes of position as we use the pencil, and the wearing down of the point (new alterations of the visual phantasm, and much more of the same sort, if we cared to get them); but these are all changes inside spirit.

The ascription of activity to matter, is, I believe, the most radical of Sellars' reforms, and deserves therefore special consideration. I would not quarrel with him on account of it; quite the contrary, I would welcome it, but I insist that it utterly destroys the concept of matter as a negation of spirit. For again I ask the Jamesian question, What is activity known as? What is the 'base' of the concept? Not the experience of mere change, supposing I could have it. If I could become an absolutely passive spectator of events, I would never ascribe activity to nature; even to witness thus the dance of the electrons would not avail. On the other hand, I used to have an experience of activity in nature when as a boy I would watch the tides roll in at Swampscott or the clouds lift over the lakes in the Adirondacks; and for the reason that I was not a mere spectator of the sounds and sights of high tide and early morning, but an interested participator in them. But I have the same experience from the most undramatic, banal situations, as when I manipulate my pen, for that is not an experience of mere change, as inadequately described above. The base of the concept of activity is an experience of volition (or interest, if you prefer that word), as directed, deflected, or obstructed from outside itself. The obstruction or deflection may come from other volitions of my own, as when one impulse contends against another; but also from something not myself, as when my interest

is aroused and directed by the sights and the sounds of the tides or the clouds; or when my purpose to write, all the time that it is served by, is governed by, what I call my pen. In the one case (the conflicting impulses) the experience is of activity of my own, within myself; in the other case, it is on the surface of myself, hence of activity both of myself and of nature, being at the boundary of both; I have called this latter 'countercontrol'.

When therefore Sellars says, There is activity in nature, either what he says has no meaning for me—is just so many word-sounds—or else he means, There is in nature something the like of which I experience in volition, in fine, there is spirit there, something akin to myself; nature is a socius, not an alien somewhat. Concepts have no meaning except in terms of their base, their origin. But, of course, the concept of activity has a base in social experiences, in fighting, wrestling, making love, arguing, conversing; in their primitive essence, however, these experiences are not different from rowing a boat or swimming, where we are in contact, not with man, but with nature. They seem to be different because the common denominator of both is veiled by the mind-matter dualism, which had its origin, as everyone knows, in the contemplation of 'free-standing mechanisms', such as clocks. For then, forgetting their own planning thought and constructive activity, where activity within confronts activity without, men seem to behold a mode of reality both independent and other than themselves. And since ours is an age when, as has so often been said, men are more than ever enamored of their machines, even with those that kill (they are sometimes called 'sweet'), I personally look forward to an increasing growth of naturalism, and of its political counterpart, communism. Yet not forever, for just as Russia has produced its Tolstoi as well as its Lenin—both *My Religion* and *Empirio-Criticism and Dialectical Materialism*—so, disillusioned with its machines and with a mechanized society, our culture shows signs of recovering its half-lost mystic insight. And of this tendency Professor Sellars is himself unknowingly a witness, for each step he has taken in the reformation of materialism is a step nearer to spiritualism—one more and he will be there!

There are still other meanings which Sellars includes in 'matter', —spatial organization and relationship. But these are clearly not distinctive, for they apply also to selves. When dinner guests sit at a round table, they have a roughly circular spatial organization and relationship. There is, in fact, no category however recondite and mathematical, in use by physicists, which, when properly understood, is inconsistent with a wholly spiritualistic world concept. To have proved that this is true is perhaps the greatest achievement in ontology of our time, the more notable that it is the result of the combined efforts of physicists and philosophers.

My conclusion is that, so far as the positive characters which Sellars attributes to matter are concerned, they are none of them distinctive, and one at least, activity, is incomprehensible except as a mode of spirit. He does, to be sure, admit that consciousness at least qualifies one portion of matter, the brain, but even there he will not allow that it belongs to the essence of what he calls its stuff or substance. For this refusal he gives two reasons, one, that consciousness is not conserved, and, two, that there is a 'more' to the brain. In reply to the first point, I would argue that at least what I have elsewhere called the matrix self—the general orientation or lifeplan—does as a plain matter of fact endure over most of the years in the life-cycle of a human being. In reply to the second point, I would admit that the brain is more than the personal experience attached to it, but would hold that one cannot infer that this *more* is alien to spirit. The group to which the self belongs is more than himself, but not other than he.

When we consider Sellars' notion of intrinsic endurance and his polemic against the distinction between necessary and contingent existence, we confront a more speculative phase of his thought. Yet here also there is a mingling of the naïve and the sophisticated. I say this not by way of criticism, for the combination of these two traits, characteristic of all forms of materialism, gives to it whatever strength and appeal it may have. This duality may, however, be disconcerting to the critic, since whenever he feels that he has downed his opponent on the level of common sense, he realizss that he may have made his escape on the level of subtle speculation. It is somewhat like the experience of the British at Cassino, who, after thinking they had annihilated the foe by aerial bombardment, discovered that he had saved himself by the use of underground tunnels, only to reappear in the same force!

Thus it is a highly sophisticated admission on Sellars' part that we have no intuition of intrinsic endurance; equally so, his seemingly contradictory assertion that the very notion that being is destroyed is *sinnlos*. On the other hand, when he argues that generation and corruption are reciprocal and complementary, and that matter is the sort of thing that may take on new qualities and evolve into complex structures, then lose those qualities and revert to simpler types of organization, without forfeiting identity or quantity, he is back on the commonsense level. Because I believe that this is the primary level on which his thinking moves, I will probe it there, first.

He admits that "composite, evolved, generated things" are contingent and pass away, yet claims nevertheless that nothing is lost to being. Now I submit that this is a monstrous paradox. When the great leader dies, is nothing lost to being? Even Sellars feels that there is paradox here; and still he is not deterred. But personally I cannot understand his logic. If being is that which we denote and

acknowledge, that which is active and effective, then the great personality, and the little one, too, is being when it thinks and decides, and when it vanishes at death, being is destroyed. Of course one can define being as that which endures forever, but I take it that Sellars is not engaged in setting up nominal definitions; and I for one would not accuse him of that; for I believe that the issue is not verbal, but ontological.

The key to Sellars' thought about being and intrinsic endurance —as to every other materialist's—is a very simple, commonplace kind of experience. An artist takes clay and moulds it, giving it the shape first of a man, then of a woman. The one shape vanishes when it is replaced by the new one; but the clay seems to endure, and its quantity is not noticeably diminished. Or a child takes blocks and builds of them a house, then knocks it down; yet lo! although the house has disappeared, the blocks remain the same in number, and apparently the same in size and weight; and seemingly the child can rebuild the original house out of them. The same type of experience is repeated in physics. Through chemical analysis water is dissolved into its elements, and can be reconstituted out of them; meanwhile, although certain qualities vanish, certain quantities remain invariable. And, while one cannot rebuild the man out of the chemical constituents of his body, once he is dead (at least not yet), something seems to remain constant through the sea-change of his decay. Furthermore, this process can apparently be continued, getting behind even the atomic shapes, until certain other shapes are reached that, so far as we know, cannot be destroyed; these Sellars calls the "floor" of being, and I, the Omega system. But even when one has worked down to this ultimate level, there are factors that remain invariant, such as Planck's constant, of a more recondite, but not of a generically different kind than the number and size of the child's blocks, or the weight of the sculptor's material.

Now what can be inferred from these experiences? Sellars, I take it, infers that because the shapes that come and go in the process are transient, they are not being, that they are purely adjectival; only the stuff or matter which these shapes clothe is being. And "contingency here seems to refer to *change in being* rather than the passage from being to not-being, or the reverse". It is interesting to recall, on the other hand, that, although this same type of experience played a large part in the formation of his ontology, Aristotle never drew this conclusion; for him the house, the man, the statue, is substance; these are not mere perishable forms, but perishable substances, and for the reason that matter is no more real than form; matter is only an abstract aspect of unitary beings that come and go. And, after emending him with Leibniz' insight that not mere form, but the 'enjoyment' of form, individualizes and substantializes, I think Aristotle was right as against the

materialist. Sellars admits that we possess no intuition of 'stuff', his correlate to Aristotle's matter, either by what he calls the participating knowledge we have of the contents of consciousness, or by external perception. It is therefore not a given existent, but an inferred entity; and, as I have tried to show, it has no distinctive content. And I find it difficult to reconcile all the fine things he has said about the importance of organization, functional unity, and levels of causality, which depend on form, with the stubborn refusal to admit form or consciousness into the essence of substance. Does he not himself say, "All of which implies that activity and organization reside in the very substance of being"; but if they do, must they not individualize and substantialize? Not only, I should hold, are there perishable substances, as Aristotle believed, but these substances are also contingent, in the scholastic sense of dependent for their existence on a sustentation from without. Even the most effective person, in all his pride of power, is dependent on the beings which correspond to the organs and cells of his body, and the food and air that he draws from his environment, and ultimately upon the electromagnetic field. All 'high-level' substances depend on lower-level substances, and on each other.

Finally, if there are contingent beings, is there a necessary being, upon which the former are dependent, itself dowered with aseity? To the first question the Neo-Thomist answers affirmatively; to the second, with the word 'creation'. I am in agreement with regard to the first answer, but not with regard to the second. The argument for a necessary being, is, briefly stated, the following. There are contingent beings, beings sustained by being not themselves; but all forms of being cannot be dependent, unless an infinite chain of being is admitted, which I should hold to be inadmissible, since the concept of an actual infinite series (as opposed to an 'open' series) is selfcontradictory. This formal type of argument, which follows St. Thomas closely, is confirmed by what we have good reason to believe on empirical grounds. For in the experience which I have called 'countercontrol' (by Fichte called 'Anstoss' and by Whitehead, 'causal efficacy') we come into contact with beings not ourselves. Now countercontrol is of various kinds and connected with phantasms of various sorts. There is the kind we name 'human', and find implicated in those phantasms, mostly visual and tactile, which we name a human shape (our own being one of them, of course); the kind we call 'living' in a broad sense, which includes the manner of behavior of phantasms of animals, plants, and the cells of our own and others' bodies; the kind we call 'molecular', with its own peculiar sort of phantasm; and finally an ultimate kind of countercontrol, the electromagnetic field, which Sellars would call the 'floor' of being, and I the Omega system. There is, moreover, corresponding to Aristotle's hierarchy

of forms, a hierarchy of these levels, in the sense that the upper depend upon the lower, not in the fashion of next-to-next, but of 'vertical' causality; the human upon the vital, the latter upon the molecular—all upon the Omega system. This system, although ceaselessly changing, is characterized by certain 'constants', which are the behavioral signs of its eternity. My colleague grants that the 'floor' of being is a field of activity; I would claim, as I have indicated, that as activity, it must be volitional in nature—in the Berkeleian sense, spiritual. In the last chapter of my book, *Experience and Substance*, I have offered reasons for believing what the mystic knows without reasons, that the Omega system is a form of being higher, not lower, than man, and is the reality which all religious souls call God. From the Thomistic standpoint, however, to identify the Omega system with the physical world is a heresy, which Dr. Rudolf Allers has compared with the doctrine of the thirteen-century philosopher, David of Dinant.[1]

Heretical also would be my rejection of the notion of creation *ex nihilo*, with regard to which I stand firm with my colleague. I am compelled to reject it because I have no experiential model for it; for me, all meaning depends, as I have said, upon finding such a model or 'base' for a concept. Creation I can understand in the sense of dream, when a succession of mental images grows out of a mood or desire; or in the closely related sense of the imagination of the artist, who composes a poem or a sonata, or of the artisan who builds a house; or of any man whose deed follows upon his decision; for in all these cases, while there is true creation, there is no creation out of nothing, but a development or emanation from a germ within the self. When, on the other hand, a theologian talks of the creation of 'souls' (that is, spirits or selves) out of nothing, I hear yet understand not, for the reason given. Unless therefore we are ready to abandon as insoluble the problem of the origin of finite selves, we are compelled to accept some form of emanation-theory—going back of St. Thomas to one of the primary sources of his philosophy, Plotinus—creation not out of nothing, but out of the substance of the One itself. From this it follows that the evil in the heart of man originates in the Omega system, a conclusion which, for the orthodox, is not only heresy, but I fear blasphemy. I once called my colleague a "pious atheist" because, like so many other so-called "humanists", while rejecting the metaphysical theory of Christianity, he appears to cherish the values that have been associated with it historically. He might retort perhaps by calling me an impious theist; but in order to answer this charge I should have to discuss the traditional problem of evil, to do which would take me too far afield.

[1] In his review of *Experience and Substance* in the October 1941 issue of *The Thomist*, page 670.

But to return to emanation: it is certain, I should suppose, that all living beings, including man, have developed out of the Omega system, which is not at all unthinkable once its spiritual character is admitted.

I conclude therefore that intrinsic endurance belongs only to the Omega system, not to matter, unless by matter is meant just that, and also not to contingent beings, hence not to being as such. Herein, if I mistake not, I stand nearer to Thomism than to my colleague, who, if I have understood him, holds that being as such does have intrinsic endurance.

One of the most interesting and novel elements in Sellars' reformed materialism is the withholding of the character of evolution from the universe as a whole, or as such. This is the more surprising since he has so long insisted on the importance of evolution and emergence for naturalism, and used to call his own philosophy 'evolutionary naturalism'. Moreover, in this phase of his thought he stands apart from Lloyd Morgan and Alexander, who like him have framed evolutionary philosophies, but with evolution a cosmical category. For Sellars, on the other hand, it is a purely local affair; the fountain of being may rise high in one place and remain low at another; and he surmises that it may never rise very high, with the result that the universe has been pretty much at the same level always. Therefore, since he holds as did Aristotle (and with this I agree) that time is no existence but a mere abstraction from change, he concludes that there is no single, all-including, one-directional time, but as many times as there are fountains of being, emerging or subsiding as the case may be. The world does not possess, as Aristotle thought, a unity of significance like a well constructed drama, but is rather a set of little episodes, individually tragic or comic in themselves. The resulting cosmic picture is, as he says, austere, but not without a certain liberalizing charm, I would add.

Once again, however, I feel that Aristotle was right as against Sellars. It is indeed true that contingent beings have their individual rise and fall and, in some instances, with a large measure of independence of each other. This holds of nations and cultures also, which are groups of tightly related contingent beings, in whose lives certain generic characters are common and hereditary. Like the individuals of which they are composed, they attain a certain level of value, and then seem incapable of moving higher. (Having just heard Shostakovitch's *Eighth Symphony* I incline at the moment to agreement with those who think that our culture reached its musical zenith with Brahms.) But this real factor of contingency and pluralism of finite beings and their values does not destroy the unity and evolutionary character of the universe, and hence of time. For unless history is a mere construction in the present, with no more ob- of the classics as eternal verities, and we forget about the new,

jectivity than fiction (as some pragmatists and Nazi philosophers seem to think) every event in the life of a contingent being has an effect—is as it were mirrored in—the Omega System, and is retained forever there. As these traces accumulate in the Omega system, it is continually enriched by them, and, in that sense at least, evolves. The universe as a whole cannot therefore be at any moment what it would have been if some event had not occurred; an *ewige Wiederkehr* or recurrence of seasons is not possible. In this way each so pathetically transient finite life has an eternal significance, and time, a direction, like an arrow. And so I would leave the matter.

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CONCERNING COMMUNICATION AND THE COMMUNITY

FEW philosophies have paid sufficient attention to the means by which man is capable of having discourse with his fellows. To be sure, philosophers have from time to time discussed the topic of language, and the topic has received increased attention of late; but only rarely is the topic discussed in terms which bring to light the way in which discourse helps men to get along together. An unfortunate bias results from concentrating upon the *nature* of language, with a consequent depreciation of the *function* it serves. Mrs. deLaguna is one of the few philosophers who have clearly perceived that language or speech is "the great medium through which human co-operation is brought about. It is the means by which diverse activities of men are co-ordinated and correlated with each other for the attainment of common and reciprocal ends." In insisting that speech is primarily a means by which man awakens responses in his fellows, Mrs. de Laguna helps to correct the misdirected notion that speech is an activity exercised primarily for the purpose of relieving feelings.

A survey of the literature on language reveals the whole gamut of theories, all the way from that of language as the God-given Logos, to that of language as a mere laryngeal mechanism, having merely a physiological basis. The intention of this paper is to consider the subject of language in a manner that will afford a bridge between philosophical theory and the urgent problems of social life. To do this, we shall look to some aspects of communication and its indispensable counterpart, the community.

To say that the purpose of language is to effect communication may be true, but it is really not very significant. Yet a recognition of the further implications of the statement leads to a consideration of many perennial problems of philosophy—the relation of thought to language, the specific character of human beings in contrast with other forms of life, the dependency of thought upon something that is the

common possession of man, the peculiar capacity of man to create and appreciate to a high degree novelty in his world, to mention only a few of these problems. Of chief importance here is the fact that man comes to believe he is uniquely capable of achieving freedom, and in our own day this freedom is closely tied up with speech. In fact the relation between speech and freedom is interwoven to such an extent that no society jealous of its future has been able to permit its members full freedom of speech—the excuse for placing limits on free speech is, of course, always in the name, not of freedom, but of license. And, indeed, free speech does jeopardize the old ways of doing things.

Communication is effected only through a means, and this means may be called, in the broad sense, language. Present-day writers have become skeptical over the possibility of discovering the origins of language, and in fact it may be more profitable to turn attention rather to aspects of the subject for which there is at least some evidence. Since we are confronted with a multitude of languages, and since in some real sense translation from one language to another is feasible, the conclusion is not unwarranted that language has an arbitrary element. Moreover, since a language does have a history, it seems further evident that because of growth and changes in language, the historical conditions under which it grows and changes are relevant to an understanding of the arbitrary aspects of language. For these reasons, the Logos-theory that language comes to man from supernatural sources, even should it be true, is sterile in what it reveals to man concerning the way in which communication actually occurs. Although there may be an ultimate "miracle of language"—the miracle being that men do somehow understand one another—the easy acceptance of the miracle (of the "somehow") can signify only the defeat of gaining knowledge of what communication is.

The problem of communication is constituted precisely because on the one hand communication involves highly arbitrary elements—sounds, marks, gestures—and on the other hand meanings which are engendered in these arbitrary elements. The sounds, marks, gestures, are symbols or human artifacts. Although the usage of these artifacts may be crystallized in rules, they have nevertheless no inherent logic such, for example, as would permit a continuous passage from mere grammar to literature. Hence it is not uncommon for those who are interested in communication to allege that grammar is sterile, or even that there is no such thing as grammar. This attitude toward the mechanism of language is extreme; but when we perceive the exorbitant claims that are made for the study of grammar, we may become more willing listeners to those who advocate the primacy of the uses to which language can be put and the objectives

which it may entail. At any rate, the marks or sounds or gestures we use are definitely subordinate in value to the ends to which we wish to put them. And, even though we may like an elegant use of these artifacts, their elegance is quite dependent upon the ends that are sought. This is to say that style is a function of the end to be achieved.

Because ends or objectives assume primary significance in the process of communication, it follows that any attempt to construct a theory of language that ignores its primary purpose can be only self-defeating. For this reason a purely behavioristic theory of language can hold no great attraction for us. If language is sheerly "subvocal talking", then man is consigned to a form of behavior which permits nothing but the emission of sounds that can have as their only consequence either the emission or the non-emission of further sounds. Surely not even in the name of adjustment (another of the unaccountables in behavioristic theory) can this description afford a theory of communication.

The theory that language is constituted by the association of a sound with an object accomplishes little more than the behavioristic theory for throwing light on the nature of communication. The associations are wholly arbitrary and can never lead to the community of relations necessary for the process of communication to occur. The associational theory consigns man to his own inner states of consciousness, and leaves him to try to make intelligible what is inherently unintelligible. The only order and coherence that man can achieve in such a world is one of garrulous associations, not one of form and decision.

Unless we assume that men can share in a common world of experience, beliefs, and things, it appears hopeless to try to make sense of even the minor degree of communication that seems obvious in our comings and goings. A common world of experience, beliefs, and things, although necessary, does not constitute a sufficient condition of the possibility of communication. In addition, communication demands that men share objectives and ends, and thus that they mutually observe the requirements necessary for attaining these ends. "Communication, which is the very object of speech", writes Edward Sapir, "is successfully effected only when the hearer's auditory perceptions are translated into the *appropriate* and *intended flow* of imagery or thought or both combined." In many ways this statement lacks precision, but I would call attention to the italicized words as worthy of reflection. In communication there is not only movement of thought, but a movement that has meaningful direction through which the appropriate and the inappropriate are defined. What is appropriate, or perhaps better, what is relevant, can be determined only with reference to the end which is sought. If we were limited

in the direction by mere association of ideas, we could never distinguish between what is relevant and what is irrelevant; for these cannot be apprised apart from the goal to be achieved.

In the process of communicating, we are confronted with possibilities for realization, and it is through decisive acts, in Whitehead's sense of the term, that we come to realize one of these possibilities. Communication is thwarted at that point at which we are unable to envisage a possible way of acting or of thinking. Little wonder is it then that Whitehead emphasizes quite correctly the aspect of novelty in the activity of language and speech. Language and speech are the means by which man foresees ways of doing things, and of taking attitudes towards things. This activity is properly called imaginative activity, for the work of the imagination is precisely that of seeing ways in which things can be ordered and made coherent. The task of doing this is one of man's deepest concerns, and is certainly one to which philosophy has especially been devoted. Needless to say such a task is extremely difficult; it is one which requires not only men of great imagination, but also men of imagination who can share and borrow from one another. The task is a cooperative one; its course may abruptly end in frustration, noble or ignoble; its accomplishment in advance of success is always in doubt.

Some observations on the way in which communication is effected may reveal more clearly what is meant by communication. We have seen already that communication is effected through a directed process which is intrinsically shareable, not dumb and mute. The process emerges from the background of experience; through a continuum of decisions it achieves order and form, dictated by an end through which what is relevant is distinguished from what is irrelevant. The end is never clearly recognized for what it is in advance of its actual achievement, for the keenest imagination is unaware of its actual success until it has actually succeeded. Throughout the process apparent discord and strife make easy prey for the faltering imagination to be led within its own cavernous subjectivity to frustration and impotence. When the process fails to achieve its end, it can give rise only to meaningless platitude and sophistical vacuity. It can give rise only to introspective pronouncements, the subject-matter of which has not been shared and which accordingly cannot become significant material for discourse. Only as the process arrives at its own fulfilment does it achieve form that is publicly acceptable; and only as the subject-matter receives form can it announce itself to the person himself as being acceptable.

In essence, communication can be effected only through a "logic of discourse". Where there are breaks in the logic, where there is a shift in the point of view, continuity is destroyed, and the further

course of thought or activity is determined by some new, unannounced, arbitrary element. Because discourse is so rarely consistent, it rarely leads to true communication. Not only is discourse difficult to undertake, but it is also difficult to criticize. Aristotle discovered an amazingly neat scheme of bringing order into discourse through the invention of the syllogism. But, although the syllogism tests with remarkable precision the consistency of discourse, it does so at the expense of requiring a simplification of discourse incommensurate with the richness and overbounding suggestiveness of even the most pedestrian communication. The undercurrents of discourse and its wider context must be sacrificed to the technique of taking two statements at a time in order to yield a conclusion. At the other extreme of discourse is mysticism (which may sometimes be identified with Hegelian dialectic) that knows no bounds for discourse, and that can reconcile all oppositions in a supreme being. The goal of communication is to arrive at a common context of discourse, which will sacrifice neither the richness of the context nor the coherence which belongs to that context, by reason of which it is a context.

Logicians often refer to this context by using the appallingly loose expression, "realm of discourse". The realm of discourse instead of being obvious and given at the beginning of inquiry becomes so, if at all, only at the end of inquiry. In fact, the whole object of inquiry is to disclose just what this realm is, and this disclosure is made only after its elements in their multitudinous relations are defined. If the inquirer already knows what the realm is, he engages in a preposterous activity of going through the motions of putting into order what he has already ordered.

The truth of the matter seems to be that except possibly in the case of a delimited intellectual area, such as in mathematics or formal logic, we never do fully know the realm of discourse. We begin our quest with myriads of suggestions and possible clues, hopeful that we may discover our way through the maze of confusing leads. We are led on by the initial impulse of suggestion, venturing through the twistings and turnings either to a blind alley or to a successful ending. In the successful venture the continuity of the path is not broken, otherwise the conclusion does not emerge as a result of the path that is taken. Suggestion requires confirmation in action or thought; it must lose its subjective character, otherwise the "intended flow" in communication remains only a stubborn, recalcitrant intent, but nothing flows or follows.

The bearing of this discussion upon the widely current theory that knowledge begins with, and that communication depends upon, sense-data should be apparent. If knowledge is reduced to sense-data and the relations between them, then there can be no flow. The relations can be only those of coexistence or temporal sequence. Accordingly,

intersubjective communication becomes not merely a problem, but an insoluble one. To start with a theory of knowledge which at the outset recognizes only subjective data and the relations of coexistence and succession among them is to preclude the possibility of arriving at an objective world, except through an arbitrary, unintelligible fiat. Moreover, the subjective and the objective world can never be brought together again; for in advance and by definition they have been set up as two separate and unrelated kinds of things.

The outlines of the theory of communication we have favored make no such distinction between two separate realms. If we wish to retain the traditional terms, subjective and objective, we should have to redefine them in a way suggested by both Dewey and Whitehead. In this event, the subjective refers to the process which has not yet issued into the communicable; it is that which has not yet achieved form. The objective is, then, that which has issued into form, and for that reason attains a public character. The objective is a possibility that has been realized.

The symbols that language uses are accordingly subjective, for they are only elements within the process of communication, and do not have determinate meaning in and of themselves. Symbols are the arbitrary and indeterminate tools of language that must be forged into a form through which communication is effected. Semantic changes may become an object of study, but such a study proceeds upon a higher level of abstraction from that which gave original force and life to the symbols themselves. Students of language have usually given themselves over to a study of these semantic changes without helping us to understand the process of communication itself.

Because communication is objective and has form, it implicitly involves the idea of the community. As Dewey remarks, one does not originally hold converse with himself and then turn to others. "Soliloquy", he says, "is the product and reflex of converse with others; social communication [is] not an effect of soliloquy." The community is established as a result of sharing the process of communicating. On the one hand the process may be one which refers primarily to the background of communal experience. In *The Problem of Christianity,* Royce defines this as the "community of memory", which is "a community constituted by the fact that each of its members accepts as part of his own individual life and self the same past events that each of his fellow-members accepts". On the other hand, the forward-looking direction refers to what Royce calls the "community of expectation" or the "community of hope", which is one "constituted by the fact that each of its members accepts, as part of his own individual life and self, the same expected future events that each of his fellows accepts". In these suggestive definitions Royce has

emphasized not only the continuity of events indispensable to a theory of communication, but also the *acceptance* of the continuity of events, without which a real idea of a community is not possible.

A thoroughgoing metaphysics would, of course, inquire into the ground of the continuity of events which is entailed in both the comunity of memory and the community of hope. The inquiry goes beyond the scope of what we may consider here. Yet it is not inappropriate to suggest that such an inquiry is in essence an inquiry into the nature of criticism itself. Criticism has as its primary function that of ascertaining whether or not there is a real continuity of events, and whether or not and to what extent that continuity is acceptable. We have already said that the ascertainment of whether or not a real continuity actually obtains is a task of extreme difficulty. For, after all, the special disciplines of science, history, the study of the arts, religion, technology, and the like, devote their energies chiefly to the question of whether intended continuities can be confirmed in experience. The special problems that emerge, the laborious techniques devised to meet these problems, the controversies, the frustrations, the brilliant flashes of insight—all these are manifest even to the casual observer in the workings of the various disciplines. Philosophy has its own tasks of criticizing—that is, of ascertaining the continuities—not only with respect to the subject-matter that the various disciplines exclude (theory of knowledge, of values, of reality, etc.), but also with respect to the relations of the various disciplines to one another. High philosophy, *sub specie aeternitatis,* has tried to bypass the concrete issues of the day, cavalierly ignoring the arbitrary and contingent elements of a given age; but the procedure has only served to discredit the office of philosophy, and to remove it from playing the role it deserves.

Criticism becomes more noteworthy to the extent to which it recognizes the arbitrary and contingent elements from which the communicative process receives its impetus. These elements are psychologically, sociologically, and historically conditioned; but they become more than psychological, sociological, or historical entities to the extent to which they realize their potentialities, and become essences, substantially embodied. Such essences are both accepted and acceptable, and constitute the basis for the community. To be sure, few or no essences are completely acceptable, and consequently must be continually subject to criticism. For this reason Herbert J. Muller in his *Science and Criticism* is justified in taking issue with Croce for failing to emphasize the role of the critic, who does not just accept art but does something to it. Again the historical element enters in, precisely because the context of even the classics continually changes, and is in some real sense not the same work of art that it was in a preceding age. From the force of tradition we think, misleadingly,

historical elements which enter into our judgments. But to omit the new historical elements, to omit the "community of memory", is to ignore the very factors that chiefly account for their acceptability, and that make them either a renascent or a decadent force in the community.

We are compelled to conclude that a community exists only as there is common acceptance of beliefs, thoughts, and actions, that are continually criticized in order to determine their acceptability for the community. Although this conclusion is not new in the history of ideas, it is nevertheless of momentous import for the advancement of democracy. In view of our statements concerning the need for emphasizing the timely elements of criticism, we ought not to remain content to talk of the romantic ideal of the community, but to direct some concluding remarks to the situation of our day.

Present day discussion has made it commonplace, but not insignificant, to think of the democratic way of life as one of sharing the goods of the world, and of mutually participating in the determination of social life. In order to embody this ideal, we have finally come to recognize, major alterations must be made in our social relations, both within the state and among states. The enlarged, worldwide character of social relations has made for exceedingly difficult problems, but not necessarily insuperable problems. The acceptability of common beliefs is no longer confined to the small, isolated community, but is to be founded in nothing short of the world community. The problem of communication is consequently greatly complicated, and is exacerbated by economic perplexities, the magnitude of which has never before been contemplated. Little wonder is it that the problems which extend over so great a scope should be "solved" in the more direct way of force, threat, and finally war. Aside from the merits and demerits of the practical exigencies that call for war, we must nevertheless recognize it as the defeat of communication and the repudiation of the community. Temporarily there is even an enhancement of community relations within the folds of the belligerent parties. The enhancement, however, cannot continue when hostilities have ceased, and when the acceptance of common aims, maintained under pressure of war, has vanished. It is then that the real problems of a democratic society will have to be faced, and that the deep fissures of society will have to be closed; for it is then that the most farreaching and cooperative, creative abilities of man are called for.

The conditions under which a democratic society can flourish must, if we are correct in our preceding analyses, be such that a common outlook is possible for that society. The dispossessed, economically, racially, politically, culturally, must be rehabilitated in order that they

may share in the common outlook, in the "community of hope". Otherwise the people live not in one community, but in many warring communities, describable in much the same way as Hobbes described the state of nature. Such a community cannot be established by superficial means. The fact that people in England and in the United States can read the same language does not bind them into a community, especially when we realize that it is only a handful of the population that is given over to reading. Nor does the participation in competitive sports, in the Olympian games with all their fanfare, contribute in any real measure to the constitution of a true community. Until more solid foundations of the community are established, until thoroughgoing participation takes the place of segregation, until the basic challenges of life are recognized as those which can be met only by concerted social effort and planning—until these things occur, modern culture is doomed to make its primary decisions dictated by unkindly force and by personal or political expediency. If, however, the conditions of modern culture can so be altered that cooperative and mutual participation and criticism can thrive, then modern man can exercise a new sense of power, and the challenge to human action, the "advance into novelty", can become meaningful and worthy of man. In this event, means will not have to be separated from ends, and man can in acting also have a sense of realization that comes with action that includes both means and end. In such a case the ends of society are to be found not in a supernatural realm or in an arcadian paradise of either the future or of the past.

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THE DEFENSE OF HUMAN EQUALITY

EQUALITY is such an important issue today that it should be given a sound defense. For a weak defense is worse than none at all. To found "the postulate of equality . . . on the demands of a fundamental human justice"[1] sounds like a *petitio principii*, in that the type of justice to which appeal is made almost surely assumes human equality. Aristocratic societies have never accepted such a concept of justice. Such an argument would convince no Nietzscheans, who Professor Spiegelberg admits are the outstanding opponents of equality.

An irrefutable argument for political equality has however been available for a decade, although it seems to have been ignored. This argument is derived from logical considerations. It may perhaps be approached most simply by asking: Who constitute the proper court

[1] Herbert Spiegelberg, "A Defense of Human Equality", this REVIEW, March 1944, Vol. LIII, no. 2, p. 124.

of judgment upon any statement that claims to be true? In science, an unequivocal answer has been reached: this judgment is given by the unanimous consent of all those who are thoroughly intelligent, informed, and unprejudiced concerning the matter at issue. Such disputed issues as the truth of biological evolution have been judged in this manner. The justification for majority decisions and for anything less than a unanimous judgment is merely that prejudiced judges are thus conveniently counted out. It is easily seen that such are actually the proper judges on any problem. Nietzsche, who published his ideas in order that they might be available to the intelligent public, was appealing precisely to this court of judgment.

It is obvious that the constitution of such a court differs with the subject at issue. In intricate problems, such as the proper conduct of a war, even a democracy entrusts decisions to military experts, however taking certain large decisions out of their hands on the ground that they have been prejudiced, when these experts have plainly made a mistake, as in the importance of airpower. Then who constitutes the proper court of judgment on the social and political issues that arise in the conduct of government? Many problems are too complicated for the average citizen. Hence the justification for representative democracy. Other problems are capable of being judged by ordinary persons. More important still, the honesty of a representative can be judged by the average person. Because of the great ease with which anyone may become prejudiced, unless special measures are taken to avoid prejudice, as in jury trials, it is wise to have as large an electorate as possible, in order that different prejudices may cancel out. Hence the justification for a democratic selection of representatives and for a free press able to publish all the facts, thus keeping the citizens adequately informed.

A solid and irrefutable foundation is then available for the political equality of all intelligent and informed citizens. It is furthermore evident that human intuition has been employing precisely this sort of criterion in democratic countries. Why has this simple argument been so neglected?[2]

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[2] For an elaboration of this brief summary, *cf.* H. H. Dubs, *Rational Induction*, Chicago, 1930, pp. 262-270; "Democracy and the Theory of Knowledge", *Personalist*, Autumn 1943, Vol. XXIV, no. 4, pp. 361-382.

REVIEWS OF BOOKS

George Lincoln Burr. His Life. By ROLAND H. BAINTON. Selections from his Writings edited by LOIS OLIPHANT GIBBONS. Ithaca, New York, Cornell University Press, 1943. Pp. xii, 506.

The number of American academicians to have a *Festschrift* presented to them during their lifetimes is very small. But to have a memorial volume a few years *post obitum* is an honor that is quite exceptional. The late George Lincoln Burr, Professor of History at Cornell University for so many years, has had this double honor. In 1931 a group of friends and former students presented him with a volume of noteworthy essays under the title, *Persecution and Liberty,* subjects which had formed the core of his thought and research for almost fifty years. Now Professor R. H. Bainton of Yale, who, though no formal student of Burr, has yet followed many of the same lines of research with gladly professed indebtedness to the master, has written a sympathetic life, and Burr's last doctoral student, Lois Oliphant Gibbons, has added a considerable selection from his published papers and reviews. The whole, a formidable volume of over 500 pages, is both a winsome tribute and an entrancing picture of a scholar and his enthusiasms.

It can only be counted to the credit of the author and editor as well as the subject that there is much in the book to challenge reflection. Every scholar in the general field of early European cultural history has had occasion to feel and often to express regret that Burr never finished any monographic opus. It is true that he was responsible for many monographs, begun in his seminars or suggested to colleagues, to whom he gave abundantly of his rich store of factual knowledge and synthetic power. In a very real sense he was *causa efficiens et praecipitans* of many books. Nevertheless a rereading of some of the reviews and papers reprinted in this volume, rich in allusion, precise in statement, measured in judgment, completely scrupulous in composition, heightens our regret that we have no great work that is his from cover to cover. He himself frequently spoke of this "failure" with wistfulness. In view of the profound influence he had on our historiography, hardly equalled by any other American scholar, we can afford to smile at his selfcriticism. Yet the gap still remains. The reasons were several. First stood his own conscientiousness. He was a perfectionist. They are rare persons, but unfortunately their production is correspondingly rare. Then he was perhaps too generous with his time and energy to worthy causes—such as the research on the Venezuela boundary dispute—to the point of prodigality. But to many it will seem that President White, who used him as a book-

buyer, research assistant, and general factotum, when Burr was already internationally recognized as a firstrate scholar in his own right, must bear the largest burden of responsibility. White could well have encouraged Burr to pursue and publish the results of his own researches.

Among the papers here reprinted several are particularly interesting. The survey of European archives should be assigned reading for every graduate student in European history. Some of the archives he describes are no longer where he saw them, a fact which obviously enhances the value of his study. The well known paper "Anent the Middle Ages", read before the American Historical Association in 1912, was then a sensation. Most of the ideas in it are still unchallenged, but Burr himself would certainly have written much differently in some matters of detail twenty years later. The literature on modern ideas current in the fourteenth century has grown tremendously in the meantime. Nicholas of Cusa cannot now be regarded as so original as Burr felt him to be. The work of Ernst Cassirer on Cusa's philosophy would have influenced Burr most fruitfully. In this study, as in many others, Burr's debt to pre-1914 German scholarship was great, and there seems to be some lack of appreciation of the high quality of much French research on the mind of the later Middle Ages and early modern times. I do not notice that he had used Troeltsch's great work, *Die Soziallehren der christlichen Kirchen* (1911). It is certain that he would have modified his concept, or at least the expression of it, of the idea of freedom in the medieval church if he had seen it.

The not less famous paper, his presidential address before the American Historical Association in 1916, "The Freedom of History", must have thrilled its hearers by its disciplined breadth of view. But here too, he would have written differently twenty years later concerning the rise of the free mind. He places Petrarch at the beginning of modern freedom of the mind. But in the past two decades, with fuller documentation, we have come to see the thirteenth century as a period when minds were, in some directions, freer than they were to be in subsequent centuries.

Burr wrote hardly a page that does not compel thought, forcing the reader into new paths, drawing from him his best concentration, or inspiriting him to new confidence that the divine in humanity has neither yet been attained nor, as certainly, is it unattainable.

For this monument to a great scholar, inspiring teacher, and valiant soul, generations of Cornellians and the whole historical craft must ever be grateful.

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Lewin's Topological and Vector Psychology. A Digest and a Critique. By ROBERT W. LEEPER. Eugene, Oregon, University of Oregon, 1943. Pp. x, 218.

The subject of this monograph is the psychology of Kurt Lewin and his co-workers. Lewin developed his psychological method in Berlin. It consists in observing individuals and groups, usually children, under more or less natural conditions of behavior. Problem situations are created and the solutions recorded, sometimes with the aid of motion pictures. The point of view from which these observations are analysed and interpreted is that of Gestalt psychology. Lewin was associated with Köhler and Wertheimer in the University of Berlin at the time when the experimental work which established Gestalt psychology was in full swing. Although Lewin took an independent course, and has always been somewhat less doctrinaire than the trio, Köhler, Wertheimer, and Koffka, who founded Gestalt psychology, his early experimental contributions, both from the laboratory and from the records he made of social situations, were of great significance in the development of this theory.

Lewin's independence has had the remarkable effect of bringing together under his leadership a group of co-workers of the most varied backgrounds and theoretical prepossessions. For a number of years, until the war made transportation difficult, this group of about seventy-five has gathered annually for a week of informal discussion. A majority of the group were accustomed to assemble from all parts of the country to present and discuss the results of their investigations under Lewin's leadership. Instead of indoctrinating his associates, Lewin set before them social problems which chiefly involved motivation with its results of success and failure, its frustrations, substitute activities, escapes from reality, satiations, and so on. As a general setting for these problems Lewin borrowed the term "topology" from mathematics. Although he sometimes suggests that "topological psychology" may eventually reduce to a mathematical formulation in these terms, what seems to be chiefly meant is a Gestalt interpretation of the "life space" of an individual in which he moves and has his being. Just as mathematical topology deals with spatial relations in abstraction without linear measurement, so the life space with its overlapping regions and references is independent of actual distances, forces, and attractions. The added concept of a "psychological force" which directs the creature toward its goal is called a "vector", and the consideration of the possible "paths" which a creature may take under the impulse of a "need" is called "hodology", a term "invented by Lewin to designate the system of concepts (or 'geometry') of direction, distance, and relations between directions

within the life space". Simply stated, the problem of Lewin's topological psychology is the analysis of a creature's behavior in terms of its interests and capacities. Hitherto, studies of animal behavior have been chiefly of two sorts: physiological, that is, neurological, muscular, and glandular—as formulated, for instance, and practised by the Russian physiologist, Pavlov—and the stimulus-response (S-R) formula of the "behavioristic" psychology propounded by E. L. Thorndike and John B. Watson. These two types of psychology have been closely related, although the physiologists have usually lacked a full and sympathetic comprehension of psychology, and the behaviorists have often lacked an adequate understanding of physiology. On the edge of these two kinds of investigation and their hypotheses has been the Freudian theory and practice of psychoanalysis with its dubious doctrine of the "unconscious". Lewin has endeavored to embrace in his "topological and vector psychology" the problems and results of all three of these modes of approach to the study of behavior. The result is by no means an eclectic psychology, but it has implied a catholicity of interests which has made a profound appeal to psychologists of quite diverse points of view and methods of work.

The volume under review is a striking evidence of this tolerance. The writer summarizes most of the experimental work of Lewin and his associates and subjects it to minute criticism at the level of its concrete results. Lewin himself contributes a "foreword" in which he expresses, with certain reservations, a sympathetic approval of Leeper's criticism of his work. That Lewin should agree with Leeper's final conclusion, I must myself doubt. This conclusion is as follows: "Lewin's interests have been related to only a portion of the whole field of problems. What is needed is an integration of his work with other work, such as that on influences of learning on motivation, work on the physiology of motives, and psychoanalytic work on complex indirect expressions of motives. His system does seem to provide, however, a means of integrating the whole range of different types of study in the field of motivation" (p. 202).

My reason for expressing this doubt is the fundamental difference of Gestalt psychology from every theory which employs a concept of "elements". For instance, Leeper is disturbed by Lewin's use of "regions" of behavior, and the reference to a "first step" in a direction of action as a means of defining it. Leeper seems to think it necessary to elementarize every course taken by an animal and reduce all to the steps actually taken, as though each were a distinct and separable unit. From this point of view he is quite unable to understand the distinction Lewin makes between "positive and negative valence": "the attractive or repulsive character of a region which occasions the existence of a surrounding field of force, the detailed structure of which is determined also by the cognition of barriers, distance, etc."

(p. 217). A positive valence is indicated when an organism is attracted towards an object which satisfies a need. Whatever is thus encountered is grasped and incorporated into the pattern of the animal's behavior.[1] The animal and its object form a single Gestalt, the parts of which are in no wise subject to elemental discrimination. A negative valence, on the other hand, signifies repulsion. The animal retreats, not in a direction which it "sees" "as likely to lead to a more favorable position" (p. 170), but blindly and without insight. We have here a fundamental type of behavior which cannot be interpreted by reference to physiological conditioning, behavioristic "S-R" formulas, or psychoanalysis. A failure to understand attraction and repulsion in terms of a Gestalt interpretation renders the whole theory of valence meaningless.

Although references to Gestalt psychology are not infrequent in Leeper's digest, they are never clarified but always taken for granted. The term itself does not appear in the rather expansive "Glossary and Subject Index" at the end of the monograph, and the reviewer is inclined to wonder if the author has truly grasped the implications of Gestalt psychology in Lewin's work. Leeper's criticism, directed as it appears to be at the level of the precise behaviors described, seems inept and misleading, because of the assumption that the psychology of motivation can be understood as an "integration" of physiology, "S-R" behaviorism, and psychoanalysis. Although any one of these theories of psychology will give a certain account of an animal's adjustments to its environment, no one of them alone, to say nothing of all together, is or can be reconciled with the general theory of Gestalt psychology.

R. M. OGDEN

CORNELL UNIVERSITY

Experiments in Education. (Cornell Studies in English XXXIII). By LANE COOPER. Ithaca, New York, Cornell University Press, 1943. Pp. x, 176.

In this book the author outlines his educational theory and practice and describes his own experiments in education, which have always stemmed from the old ways, from historical experience. The great educators who have most influenced Professor Cooper are the writers of the New and Old Testament, Plato, Aristotle, Quintilian, Benedict, Milton, August Boeckh, and A. S. Cook. The fundamental disciplines for him are the study of the Bible, Greek, Latin, and mathematics. He offers descriptions of eight courses, undergraduate and graduate, that he has given from time to time during the past forty years. These courses admirably illustrate that he has long practiced what he preaches.

[1] See the present writer's *The Psychology of Art* 4 ff.

Professor Cooper takes a firm stand. He is convinced, and upon ample evidence, it must be admitted, that "our scheme of public education in America is an unreligious scheme". He believes that the decay of religious training has been accompanied by a decay of scholarly training. Most of us, he finds, have sold our "Biblical and classical inheritance for a mess of pseudo-science"; for the solid study of grammar and mathematics we have substituted the "glib pretentious bluff" of new experimental curricula—"the 'social sciences' and other novelties that pig together with them".

But Professor Cooper's own scheme of education, which has worked well for him as it has worked well for other distinguished educators in the past, is aristocratic. It is aristocratic in both theory and practice. His own classes, for example, have always been strictly limited in size and carefully selected for quality. Will such an aristocratic scheme work in our big universities which, rightly or wrongly, are now almost frantically seeking new methods and materials adapted to democratic education? No. How can it? We do not have enough scholars among our teachers, and most of our freshmen are not yet ready, nor, perhaps, ever will be, for the educational regimen that Professor Cooper upholds. Lawless democratic America is not yet ready for the fixed laws of ancient Egypt; it must first find out what its own laws and principles should be. Nevertheless, Plato and Professor Cooper offer invaluable help, and I wish that our democratic "reformers" would hearken to *Experiments in Education*. Unfortunately, most of them will never see the book.

MARVIN T. HERRICK

THE UNIVERSITY OF ILLINOIS

Papers from the Second American Congress on General Semantics, University of Denver, August, 1941. Non-Aristotelian Methodology (applied) for Sanity in our Time. Compiled and Edited by M. KENDIG. Chicago, Institute of General Semantics, 1943. Pp. xxiv, 581; 12.

In his "Introduction", the editor writes: "In sum these papers are demonstrating in one way or another that it is possible to make a direct attack on some sources of our present difficulties; that fundamentally we are simply self-paralyzed by an inadequate general method of evaluation which is largely unconscious; that we can directly change 'fixed' attitudes and broaden intelligence by changing our method of evaluating ourselves and the world; that a more adequate method has been formulated which generally does this when applied; that the method is proving to be generally workable and teachable and so implies a program for mass education and re-education in our time." The method is one devised by Count Korzybski and described at length in his book *Science and Sanity*, reviewed by the writer in this journal, January, 1935, 82-84.

Some ninety papers were presented at the Congress, of which eighty, by seventy-three authors, are reported in this volume. The most arresting feature of these reports is the wide range of callings represented among the reporters. The editor classifies them under sixty-three headings, and they include teaching, social work, government, business, medicine, dentistry, journalism, and the motion-picture industry. How the interests and practices of persons with such a diversity of callings can agree upon a common method of inquiry and evaluation is remarkable. Any one who has attempted to read Count Korzybski's book will realize the difficulty of it. Yet the "non-Aristotelian" principle which he teaches is very simple. He denies the so-called "law of identity", that A is A, and substitutes for it the obvious principle that a word is never the thing which it symbolizes, that it never covers all the characteristics of the object to which it refers, and that it is "self-reflexive", or, in other words, that it puts an undue emphasis upon the user of the word. As one of the authors (A. W. Read), remarks, "a full semantic definition of a word involves at least four aspects or dimensions: 'phonology' (the particularization of the word-form), 'syntax' (the relation of word-forms to one another), 'lexicon' (the relation of the word-form to what it is used to represent or symbolize), and 'pragmatics' (the relation of the word-form to the people who are communicating)". A similar denial of the law of identity is reiterated throughout these papers in reference to 'maps'. "The map is not the territory; it does not represent all the territory; it is self-reflexive."

One is amazed to find that so simple a formula to negate reification is applicable with what appear to be beneficial results in the treatment of scientific theory, including higher mathematics, medical practice, ranging from psychopathic personality to dental caries, social relations, propaganda, teaching of all subjects, and even the national spending program of deficit finance.

That words have a way of tyrannizing over our actions is commonly admitted, and that we allow ourselves to pass readily from observation of events to an order of abstraction which is no longer "correct-to-fact" is well known. Modern science has given up the absolute entity and the elementaristic notions of classical space and time. Perhaps the common man can be re-educated to understand that there are no "brute facts" to start with, and that a sane inquiry is promoted with the aid of "extensional devices" such as the application of "indexes", "dates", "quotes", "hyphens", and the convenient "etc." to remind us that what we say in symbols is only a part of what might be said, and of which we should be aware somehow when we do say whatever we say. It is important to know and behave with the knowledge that subject and predicate are not two things but aspects of one process. The use of the hyphen may help in this case. "Indexes"

remind us that we are dealing with several individuals and instances, and not with a generalized entity which includes them all. So, too, dates of occurrence specify events and the "etc." covers what is left out. As for "quotes" they remind us of context, and it has been the function of the editor of these papers to add them wherever a term used by an author seemed to imply too hasty generalization or a reversion to nominalism.

The extreme difficulty of remaking a language in which the very syntax implies the law of identity is everywhere apparent in these papers. It is hard to state Korzybski's case without either reducing it to silliness or becoming involved in a kind of scientific jargon which defeats its own end. As an instance of the latter I quote Korzybski's own sentence: "With the old Aristotelian two-valued orientation it is humanly impossible to have the modern, infinite-valued non-Aristotelian process orientation, and therefore it is impossible to 'think' about ourselves in electro-colloidal neurological terms." Even with a "modern orientation" how many can think of themselves in "electro-colloidal neurological terms"? And to what effect? Besides, even the master or his editor appears to have slipped in failing to place "infinite-valued" in "quotes"; for, although used adjectivally, these words suggest the concept of "infinity" which can be neither "indexed" nor "dated". Indeed, they are "weasel words" which transcend observation and are in no wise "correct-to-fact". Yet despite the difficulties and limitations of Korzybski's "modern orientation", it is interesting to know that a simple rationalism seems to do so much for so many persons; patients and practitioners, students and teachers, the general public and its purveyors of amusement, ideas, and general welfare.

R. M. OGDEN

CORNELL UNIVERSITY

The Maritain Volume of THE THOMIST. Dedicated to Jacques Maritain on the occasion of his Sixtieth Anniversary. By various authors. New York, Sheed & Ward, 1943. Pp. vi, 374.

Four articles are concerned directly with Jacques Maritain, namely, "A Biographical Impression" by H. L. Binsse, "On Maritain's Political Philosophy" by Waldemar Gurian, "Jacques Maritain: Est, Est, Non, Non" by Ruth Anshen, and "Maritain's Philosophy of the Sciences" by Yves Simon. The second article is a presentation of a fundamental theme that runs throughout Maritain's political writings. "Maritain believes that only the Christians who are citizens of the one *supratemporal* polis, the Church, know about the deepest foundation and ultimate finality of this (the temporal) common good, but it is given to all groups in a more or less imperfect way, and not as an expression of theoretical argument, but as a common duty and

work" (16). The article by Ruth Anshen is so rhetorical that it does little to advance the understanding of Maritain's philosophy, and includes occasional condemnation of views vaguely identified as idealistic. The article by Yves Simon will be examined presently.

"The Theological Ingredients of Peace" by J. C. Osborn shows pretty plainly the relation between Christian faith in God and the virtues of wisdom, charity, mercy, and justice so necessary for the maintenance of peace. The succeeding essay, "The Virtue of Social Justice and International Life" by Francis E. McMahon, asserts that social justice should be extended to a world community. In the essay "The Theory of Oligarchy: Edmund Burke" by Robert M. Hutchins, the author explains Burke's inconsistent views of representative government by his desire to protect the aristocracy from attack from any quarter.

"Maritain's Philosophy of the Sciences" by Yves Simon is an exposition of Maritain's well known doctine of the three degrees of abstraction resulting in the establishment of physics, mathematics, and metaphysics. Physics is concerned with the principles of mobile and sensible being. It consists of concepts in a "descending analysis" ending finally in data that are sensibly observable. The philosophy of nature or metaphysics consists of concepts in an order of "ascending analysis". The author uses the following illustration. Man is a rational animal; an animal is a living body endowed with sense-knowledge; a living body is the active origin of its own development. To render the notion of life clearer, "we would have to define it as self-actuation" (p. 90). Selfactuation is a metaphysical concept whose elements are identity and causality; causality can be analysed into potency and act. Identity, potency, and act are directly reducible to being, and we have now reached the end of analysis. This whole procedure is metaphysical, though what insight into the philosophy of the sciences is gained is not evident. There is also an act of mind called *dianoetical intuition* that penetrates an essence, and perceives what a thing is. Apparently this act is successful in only one case, that is, in informing us that man's essence is reason. In other cases we must be satisfied with the observable regularities of the thing investigated.

In "The Role of Dogma in Judaism" by Louis Finkelstein, the author explains that since Jewish doctrine has always been expressed by commands or "propositions in action" it has preserved both fluidity and continuity.

Robert E. Brennan in "The Thomistic Conception of Culture" shows, by means of a collection of admirably chosen texts, that St. Thomas had a well defined view of this matter. Within the objective range of culture, he treats of material goods, of the social order and its juridical institutions, of art and morality, and of human knowledge; nor did he ignore the dynamism of culture. This is an en-

lightening essay and susceptible of expansion into a complete exposition of what Christian civilization should be.

"Justice and Friendship" by Gerald B. Phelan is chiefly a contrast between the views of Aristotle and St. Thomas. "Claudel and the Catholic Revival" by L. S. Bondy provides an interesting chapter in recent literary history.

"The Demonstration of God's Existence" by Mortimer J. Adler argues that reason can, but has not yet demonstrated God's existence. Part III of the essay examines the sole possibility (so the author claims) of rational proof. "IF anything exists whose continuation in existence requires the operation of an efficient cause at this very moment, THEN a being exists whose existence is uncaused. Corporeal substances do exist. THEREFORE, God does exist" (209-210). For the major premise to be established, Adler states that at least these conditions must be maintained. The argument must show (1) that there is only one unique being; (2) that a necessary being causes the existence of a contingent being immediately; (3) that in the order of being, two or more things are not mutually sustaining, *e.g.*, two incorporeal contingent beings cannot cause each other.

John S. Middleton's "Contemplation in America" is a plea for the certitude about certain truths and the consequent serenity that spring from contemplation. "Providence" by W. R. Thompson is an exhibition of marvellous adaptations in nature. Gerard Smith's "A Date in the History of Epistemology" examines the question whether we know existents, and concludes that we do through the cooperation of sensible and intellectual cognition. "Dante and Thomism" by D. Sargent has something to do with Dante's power of distinguishing.

"Matter, Beatitude and Liberty" by A. C. Pegis seems to be concerned with the unfortunate effect of necessitarianism in Greek thought as contrasted with the Thomistic view of Divine liberty. This is illustrated by reference to Aristotle's conception of man's final good. For Aristotle, man's share in his ultimate destiny is enacted here and now, and is precarious. The insecurity of man's happiness is somehow connected by the author with Aristotle's view of matter as not dependent on the Divine Will, but as necessitated.

The article "Art in France and England, 1540-1640" by John U. Nef is what it is entitled. "John Dewey and Modern Thomism" by William O'Meara is a temperate examination of Dewey's obscure notion of experience, together with a correct rejection of Dewey's identification of scholastic theism with a static universe and a world of mere appearance.

The volume ends with a Motet "De Ordinatione Angelorum" for mixed choir and five brass instruments by Arthur Lourié. The text is selected by Raïssa Maritain from a passage on the angels by St.

Thomas. So far as the reviewer can detect, the Motet is not unattractive, and might be impressive.

J. R. CRESSWELL

WEST VIRGINIA UNIVERSITY

The Survival of Western Culture. An Inquiry into the Problem of its Decline and Resurgence. By RALPH TYLER FLEWELLING. New York, Harper and Brothers, 1943. Pp. xvi, 304.

Dr. Flewelling, in this his ripest and most original work, has ventured into the perilous field of philosophy of history. Although intending to answer Spengler, the author modestly disclaims Spengler's "capacious learning". He does not follow Hegel, Schlegel, or Spengler, in detailed accounts of historical cultures. His aim, rather, is to find a central meaning or goal in history, and to illustrate man's failures and successes by various examples.

The book is in four main sections with an epilogue. The first section deals with individualism in Western culture; the second, with the present dilemma in civilization—a Jeremiad almost as pessimistic as Spengler himself in its denunciation of modern morals, law, democracy, education, science without morals, and the quagmire of philosophy. The third section deals with the scientific revolution and the new day; Chapter xx finds in relativity, the principle of uncertainty, quantum theory, and real duration, new insights into the meaning of persons. The fourth section, on the survival of the West, develops the thought that the idea of personal freedom is destined to survive. In the epilogue an analogy is drawn between emergent evolution, quantum theory, and the significance of special periods of history as epochs of creative advance.

The central purpose of history (as against Spengler's Oriental theory of cycles) is taken to be "the cultivation of the achieving person", "the free development of the individual in intellectual, moral, and spiritual accomplishment" (10). Great heroes of this idea, for our author, are Anaxagoras, Socrates, Zeno (who is said to be probably Jewish), and Boethius. There is surprisingly little about Jesus or Kant, although the contribution of each is acknowledged. Holding to personalism, Flewelling rejects both individualism and absolutism. Individualism is atomistic, quantitative, mechanical. Personalism is "organismic". Yet the distinctions between individualism and personalism are not fully worked out. More stress is laid on the value of individual personality than on "the art of living together" (9). The social problem is neglected to some extent.

On the one hand, therefore, personalism threatens to remain individualistic; while, on the other, it threatens, if organismic, to move toward the totalitarian view. This apparently unstable equilibrium is

doubtless intended to illustrate the (Hegelian) principle "that contradictory and mutually conflicting theories absorb and sustain each other" (22, cf. 212).

Three great merits of this work are its clarity and unity, its evaluation of personality, and its correlation between recent science and the meaning of personality (relativity shows the person to be a "chooser of frames of reference"). The book would have profited by more exact definitions and less scorn for applied mathematics (it mentions "insane confidence in mathematics" [80]). Wartime printing has left errors on pp. xiv, 23, 28, 40, 67, 70, 88, 101, 145. Dr. Flewelling has written a book that is suggestive and synoptic without aiming to be definitive.

EDGAR SHEFFIELD BRIGHTMAN

BOSTON UNIVERSITY

The following books have been received:

Either/Or. A Fragment of Life. By SØREN KIERKEGAARD. Volume One translated by DAVID F. SWENSON and LILLIAN MARVIN SWENSON. Princeton, Princeton University Press, 1944. Pp. x, 387. (London: Humphrey Milford, Oxford University Press.)

Either/Or. By SØREN KIERKEGAARD. Volume Two translated by WALTER LOWRIE. Princeton, Princeton University Press, 1944. Pp. xvi, 304. (London: Humphrey Milford, Oxford University Press.)

Mind and Deity. Being the Second Series of a Course of Gifford Lectures on the General Subject of Metaphysics and Theism given in the University of Glasgow in 1940. By JOHN LAIRD. New York, N.Y., Philosophical Library, 1941. Pp. 322. (London: George Allen & Unwin, Ltd.)

Public and Private Government. By CHARLES EDWARD MERRIAM. New Haven, Yale University Press, 1944. Pp. x, 78. (Powell Lectures on Philosophy at Indiana University, Eighth Series.)

Bedae: Opera de Temporibus. Edited by CHARLES W. JONES. Cambridge, Massachusetts, The Mediaeval Academy of America, 1943. Pp. xiii, 416.

Verifiability of Value. By RAY LEPLEY. New York, Columbia University Press, 1944. Pp. xii, 267.

The Condition of Man. By LEWIS MUMFORD. New York, Harcourt, Brace and Company, 1944. Pp. x, 467.

The Architectonic City in the Americas. Significant Forms, Origins, and Prospects. By HUGO LEIPZIGER. Austin, The University of Texas, 1944. Pp. 68; 40 plates. (The University of Texas Publication No. 4407: February 15, 1944.)

Justice and World Society. By LAURENCE STAPLETON. Chapel Hill, The University of North Carolina Press, 1944. Pp. 150.

Society and Ideology. An Inquiry Into the Sociology of Knowledge. By GERARD DEGRÉ. Morningside Heights, New York, Columbia University Bookstore, 1943. Pp. x, 114.

The Nature of Self. By A. C. MUKERJI. Allahabad, The Indian Press, Ltd., 1943. Pp. xiv, 404. Second Edition.

Of Being and Unity. Per PICO DELLA MIRANDOLA. Translated from the Latin, with an introduction by VICTOR MICHAEL HAMM. Milwaukee, Wisconsin, Marquette Universiy Press, 1943. Pp. ii, 43.

NOTES

Les Entretiens de Pontigny will hold a series of meetings at Mount Holyoke College from July 23 to August 19, 1944. The general subject of discussion is "L'Idée de Crise et notre Crise". The meetings of the section on philosophy will be held July 23-29, under the directorship of Jean Wahl.

The Armed Forces Institute has authorized the preparation of a course on philosophy to be offered to members of the various branches of the service. The course will be the equivalent of a full year's college course. The plan called for an entirely new text, a separate book of readings, and the Workbook which is a regular feature of these Institute courses. At the end of December, 1943, the following persons were requested by the Committee of the American Council and the Armed Forces Institute to prepare the respective sections of the text assigned to them:

I. What Is Man? by Professor William Ernest Hocking.
II. Social and Political Philosophy, by Professor Charles William Hendel.
III. Personal Ethics, by Professor Brand Blanshard.
IV. The Meaning of Religion, by Professor John Herman Randall, Jr.
V. World Views, by Professor Hocking.

The book of readings is prepared by Dr. William Pearson Tolley, Chancellor, and Professors Raymond F. Piper and Ross E. Hoople, of Syracuse University.

The Workbook is in charge of Professor Robert F. Davidson, Stephens College, Columbia, Missouri.

In an article in *The Huntington Library Quarterly* for February, 1944, Dr. Ernest Campbell Mossner argues that Hume's letter to a Physician (*Letters of David Hume*, ed. J. Y. T. Greig, I 12-18) was intended not for George Cheyne but for John Arbuthnot, and suggests the hypothesis that Hume never sent the letter because the writing of it cured him of his malady.

The second annual meeting of the Conference on the Scientific Spirit and Democratic Faith was held in New York, May 27 and 28, at the Meeting House of the New York Society for Ethical Culture, with Professor J. H. Randall, Jr., as Chairman of the Conference and Professor John Dewey as the Honorary Chairman. Four panel discussions were held on the general topic, "The Authoritarian Attempt to Capture Education".

The following is a list of articles in current philosophical periodicals:

PHILOSOPHY XIX 72: *W. D. Falk*, Morals Without Faith; *Ian W. Alexander*, Voltaire and Metaphysics; *G. C. Field*, On Misunderstanding Plato; *R. I. Aaron*, Our Knowledge of One Another; *M. Mitin*, Twenty-Five Years of Philosophy in the U.S.S.R.

THE JOURNAL OF PHILOSOPHY XLI 7: *Lewis Beck White*, Judgments of Meaning in Art; *George Seward*, Play as Art. 8: *Wolfgang Köhler*, Value and Fact; *Wesley C. Mitchell*, Facts and Values in Economics. 9: *Richard M. Brickner*, Man and His Values Considered Neurologically.

PHILOSOPHY AND PHENOMENOLOGICAL RESEARCH IV 3: *Fritz Kaufmann,* The World as Will and Representation: Thomas Mann's Philosophical Novels, Part II; A Symposium on Meaning and Truth: *C. J. Ducasse,* Propositions, Truth, and the Ultimate Criterion of Truth; *Alfred Tarski,* The Semantic Conception of Truth and the Foundations of Semantics; *Wilbur M. Urban,* The Dialectic of Meaning and Truth: Truth as Immanent in Discourse; *Norman Dalkey,* The Limits of Meaning; *John Wild,* Truth in the Contemporary Crisis; *Helmut Kuhn,* Charity and Contemplation: Comments on Reinhold Niebuhr's Gifford Lectures, Volume Two.

THE JOURNAL OF SYMBOLIC LOGIC IX 1: *Theodore Hailperin,* A set of axioms for logic.

SCIENCE AND SOCIETY VIII 2: *Maurice Dobb,* Aspects of Nazi Economic Policy; *Lyman R. Bradley,* Literary Trends under Hitler; *L. A. Leontiev and others,* Political Economy in the Soviet Union; *Charles Lipton,* The Social Thought of Diderot; *Lt. James Peterson,* The Trade Unions and the Populist Party; *Alfred J. Lotka,* Evolution and Thermodynamics.

THE ANTIOCH REVIEW IV 1: *J. Donald Kingsley,* Serious Blunder on the Right; *Eric Russell Bentley,* Romanticism: A Re-Evaluation; *Robert A. Brady,* The C.E.D.: What Is It and Why?; *Allan B. Cole,* What Can We Do About Japan?; *Joseph Rosenfarb,* The Problem of a Unified Command; *Charles I. Glicksberg,* The Negro Cult of the Primitive; *C. Hartley Grattan,* The Australian Labor Movement; *Harold A. Taylor,* The Philosopher in Society; *Boyd H. Bode,* Liberal Education for Today; *Herman Schnurer* and *George R. Geiger,* Political Dictionary, 1943-44; *Henry S. Churchill,* The Best Laid Plans.

THE HIBBERT JOURNAL XLII 3: *T. B. Luard,* A Meditation on the Living God; *Ronald Gregor Smith,* The Living and Speaking God; *L. Richman Wheeler,* Survival: Biological and Human; *Edward Quinn,* The Natural and the Supernatural; *J. M. Lloyd Thomas,* "Compulsory Christianity"; *G. C. Coulton,* Antisemitism; *A. L. Macfie,* The Why, Where and How of Church Interference in Economics; *Robert Eisler,* Austrian Ideologies; *Sydney E. Hooper,* Telepathy in the Light of Whitehead's Philosophy; *Philip Leon,* Who Makes History?; *Erich Meissner,* The Moral Problem of Exile; *Andrew Landale Drummond,* Blancho White; *S. H. Mellone,* Survey of Recent Philosophical and Theological Literature.

THE THOMIST VII 2: *Sebastian Carlson,* The Virtue of Humility; *Thomas Greenwood,* The Platonic Theory of the Continuum; *W. H. Kane,* The Nature and Extent of Philosophy of Nature; *John A. Oesterle,* Another Approach to the Problem of Meaning.

FRANCISCAN STUDIES XXV (N.S. IV) 1: Letter of Pope Pius XII on St. Bernardine; *Cuthbert Gumbinger,* St. Bernardine's Unedited *Prediche Volgari; Alexander Wyse,* The *Enquêteurs* of Louis IX; *Joseph G. Walleser,* Staging a Tertiary; *Mary R. Learned,* Saints' Lives Attributed to Nicholas Bozon; *Brendan Wolf,* Local Attitudes toward a Catholic College.

JOURNAL OF THE HISTORY OF IDEAS V 2: *Samuel H. Monk,* "A Grace Beyond the Reach of Art"; *Paul H. Johnstone,* The Rural Socrates; *Talcott Parsons,* The Sociology of Religion; *Leo Spitzer,* Geistesgeschichte vs. History of Ideas as Applied to Hitlerism; *Arthur O. Lovejoy,* Reply to

Professor Spitzer; *Paul O. Kristeller,* Ficino and Pomponazzi on the Place of Man in the Universe; *Josephine L. Burroughs,* Translation of Ficino's *Platonic Theology.*

THE JOURNAL OF RELIGION XXIV 2: *Paul S. Minear,* Time and the Kingdom; *Allen Wikgren,* The Targums and the New Testament; *John T. McNeill,* The Church in Post-Reformation Reformed Theology; *Winthrop S. Hudson,* A Suppressed Chapter in Quaker History; *Harold H. Punke,* The Flags and the Courts in Free Public Education.

THE REVIEW OF RELIGION VIII 4: *Paul Oskar Kristeller,* Augustine and the Early Renaissance; *Peter A. Bertocci,* Faith and Reason: The Implications of Dr. Ferré's View; *Robert P. Casey,* Russian Religion Today: A Review Article.

ANGLICAN THEOLOGICAL REVIEW XXVI 2: *John L. Casteel,* Conceptions of Preaching in the Yale Lectures; *Eric Montizambert,* The Social Implications of Christian Worship; *Joseph Buchanan Bernardin,* The Golden Mean (Church Congress Syllabus 8: "The Anglican Tradition", Part IV); *Richard M. Honig,* The So-called "Vicariate" of Illyricum; *Henry Wilder Foote,* "The Hymnal, 1940"; *W. Norman Pittenger,* The Universal Doctor; *Grace Amadon,* The Johannine-Synoptic Argument.

THE HARVARD THEOLOGICAL REVIEW XXXVII 1: *Charles C. Torrey,* The Older Book of Esther; *Campbell Bonner,* Notes on Mark 6. 20; *H. J. Rose,* Qvisqve Svos Patimvr Manes; *Jacob J. Rabinowitz,* Some Remarks on the Evasion of the Usury Laws in the Middle Ages.

SPECULUM XIX 1: *Karl Young,* Chaucer's Appeal to the Platonic Deity; *Hélène Wieruszowski,* Art and the Commune in the Time of Dante; *W. L. Hildburgh,* On Italian Copper Champlevé Enamels of the Thirteenth Century; *F. J. Carmody,* Florence: Project for a Map, 1250-1296; *William Hammer,* The Concept of the New or Second Rome in the Middle Ages; *C. E. Odegard,* Two Errant Papal Briefs for Siena; *L. E. Arnaud,* The *Sottes Chansons* in *MS. Douce 308* of the Bodleian Library; *James Travis,* Elegies Attributed to Dallan Forgaill; *A. K. Coomaraswamy,* Sir Gawain and the Green Knight: Indra and Namuci; *Hugh O'Neill,* Botanical Observations on the Voynich MS.; *H. D. Austin, Mola* in Dante's Usage.

THE AMERICAN JOURNAL OF PSYCHOLOGY LVII 2: *M. Supa, M. Cotzin,* and *K. M. Dallenbach,* "Facial Vision": The Perception of Obstacles by the Blind; *M. Moelk,* Vocalizing in the House-Cat; A Phonetic and Functional Study; *M. Bentley,* A Psychological Sketch of the Young Child; *H. M. Johnson,* A Useful Interpretation of Pearsonian r in 2×2 Contingency-Tables; *F. Heider* and *M. Simmel,* An Experiment Study of Apparent Behavior; *J. L. Finan* and *R. B. Malmo,* New Tapping Board and Steadiness Box; Notes and Discussions.

PSYCHOLOGICAL REVIEW LI 2: *George Malcolm Stratton,* Violence Between Nations; Deeper Sources; the Way of Liberation; *John B. Carroll,* The Analysis of Verbal Behavior; *Francis W. Irwin,* The Realism of Expectations; *Mapheus Smith,* Social Interaction and Collective Behavior; *Lewis M. Terman,* Barbara Stoddard Burks: 1902-1943.

JOURNAL OF EXPERIMENTAL PSYCHOLOGY XXXIV 2: *T. H. Howells,* The Experimental Development of Color-Tone Synesthesia; *J. R. Knott, E. B.*

Platt, and *H. D. Hadley, Jr.,* A Preliminary Neurophysiological Investigation of the Behavioral Concept of Stimulus Trace; *H. B. Lewis,* An Experimental Study of the Role of the Ego in Work. I. The Role of the Ego in Cooperative Work; *B. J. Underwood,* Associative Inhibition in the Learning of Successive Paired-Associate Lists; *D. A. Grant* and *J. K. Adams,* 'Alpha' Conditioning in the Eyelid; *R. E. Taubman,* The Effect of Practice with and without Reinforcement on the Judgment of Auditory Number; *A. Steinman* and *S. Veniar,* Simple Reaction Time to Change as a Substitute for the Disjunctive Reaction; *J. B. Morgan,* Effect of Non-Rational Factors on Inductive Reasoning.

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